STRATEGIES FOR RISK MANAGEMENT IN HIGH DENSITY HOUSING

Alberta
MUNICIPAL AFFAIRS
Innovative Housing Grants Program

STRATEGIES FOR RISK MANAGEMENT IN HIGH DENSITY HOUSING

April, 1986

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The views and conclusions expressed and the recommendations made in this report are entirely those of the authors and should not be construed as expressing the opinions of Alberta Municipal Affairs.

ISBN: 0-88654-156-5

FOREWORD

The project documented in this report received funding under the Innovative Housing Grants Program of the Alberta Department of Housing. In May, 1986 the Alberta Department of Housing was amalgamated with Alberta Municpal Affairs which is now responsible for issuing this report.

The Innovative Housing Grants Program is intended to encourage and assist housing research and development which will reduce housing costs, improve the quality and performance of dwelling units and subdivisions, or increase the long term viability and competitiveness of Alberta's housing industry.

The Program offers assistance to builders, developers, consulting firms, professionals, industry groups, building products manufacturers, municipal governments, educational institutions, non-profit groups and individuals. At this time, priority areas for investigation include building design, construction technology, energy conservation, site and subdivision design, site servicing technology, residential building product development or improvement and information technology.

As the type of project and level of resources vary from applicant to applicant, the resulting documents are also varied. Comments and suggestions on this report are welcome. Please send comments or requests for further information to:

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ACKNOWLEDGEMENTS

The owners, managers and residents of the apartment buildings which were the subject of this study are sincerely thanked for their generous contribution of time and knowledge to the project.

The author is indebted to the Calgary Police Service and, in particular, Constable G. Dilschneider for full co-operation and continued assistance on this project between June 1983 and December 1985.

Many other individuals contributed time and the benefit of their experience to the project. Among those who made a special contribution to its completion were: P. Billington, M. Chow, L. Lewis, L. Sprague and R. Adam.

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EXECUTIVE SUMMARY

The purpose of this study was to identify practical ways of reducing the opportunity for successful commission of certain property crimes in high density apartment buildings and neighbourhoods.

A high density multi-storey apartment district in Calgary, Alberta was chosen for study. The area exhibited a higher than average property crime rate and there was a predominance of the housing form of particular interest. A case study approach was adopted for the analysis of a selection of the area's buildings - some prone to repeated property offenses and others free of most offenses. An extensive data gathering exercise was initiated at each of the selected buildings, using questionnaires, interviews, archival analysis and on-site observation. The information provided considerable insight as to the nature of each building, its residents and management, and the extent and characteristics of crime in each case. From comparing the presence or absence of the same contributors to crime prevention at each building, conclusions were drawn about what seemed to be the most effective (crime preventing) design and management features. These were written in the form of recommendations for others' use, depending upon the nature of the property crime problem identified at a particular building.

The documentation and analysis of conditions found at the buildings were organized around five variables thought to contribute to a potential criminal's success. Elimination and/or positive control of these variables was considered fundamental to reduction of the particular crimes of concern. Based on those variables, five broad directives were the focus of detailed strategies listed in this document:

- decrease the potential offender's opportunity for access and escape,
- increase the surveillance capability of the environment,
- increase the technical difficulty and risk of gaining access to the environment,
- promote proprietary feelings among residents and managers and
- strengthen the social organization of residents and managers.

Each crime environment differs in some way from another. Therefore, it should be expected that a combination of strategies found effective for one setting may be ineffective elsewhere. A prerequisite to any successful program is a thorough understanding of the crime problem and the place where it occurs, before choosing complementary courses of action to answer the challenge of crime prevention.

1.0 INTRODUCTION

The purpose of this study has been to identify practical residential design and management strategies to aid in the reduction of break and enter, theft from vehicles and vandalism in high density apartment buildings and neighbourhoods.

1.1 THE PROBLEM

There are many fundamental considerations related to the design and supply of livable, marketable high density housing. The problem of crime and its prevention in this housing environment is one functional consideration often shunted aside by designers, suppliers and consumers. Faced with matters of rent, suite size, parking supply, zoning and building codes, amenity areas, management, maintenance and upkeep (and a host of other concerns), who wants to think about an issue which (fortunately) does not touch us all as part of our daily routine?

The occurrence of a criminal event nearby or within the place most considered to be secure, our home, is a devastating experience for victim and neighbours alike. A series of localized criminal offenses may extend a deleterious effect beyond the life of the victim to that of a building (its owner and residents), a few blocks in an area, or a whole district of the community. The effect might be perceived in one or more ways: declining property values, more homogenous apathetic population, or the feeling that an area or building is just plain undesirable or unsafe to live in.

These conditions are rarely the result of crime alone. Usually, the dynamics of community growth and development mean beneficial physical and social change for some areas, and not for others. At the same time, some crimes (for example, break and enter) are more opportunistic in nature than others (for example, premeditated murder). The presence of opportunity for the successful commission of a crime has a great deal to do with the decision of a potential offender (be he amateur or professional) to choose one place versus another for his act. It is easy to see how the nature of some crimes and an area undergoing change can mutually support a cyclical increase in crime rate and real decline.

When many older districts undergo change it is often from a lower density dwelling form to a higher density dwelling form. Multi-storey high density housing presents a special set of opportunities for the would-be offender. The sheer number of dwellings under one roof, an often absent population, and semi-public areas (hallways and stairs, enclosed parking areas, recreation areas and roof gardens) under no one's clear control make the apartment a potentially easy target for the opportunist.

This study was predicated on both of the aforementioned ideas. Places undergoing change and redevelopment, and the multi-storey high density housing form, together present considerable opportunity for the amateur or professional would-be offender.

Historically, Alberta has been a province of growth and change. Its towns and cities have been the recipients of both the wealth and costs of waves of rapid development. For those communities with new areas containing high density housing, or older areas redeveloping to multi-storey apartment buildings, this study may assist in the prevention of a new crime or reducing an existing one.

1.2 SCOPE AND FOCUS OF THE STUDY

The area chosen for study was the Connaught-West Victoria district in Calgary. This next-to-downtown area has changed from an inner city neighbourhood of older homes and institutions to a high density apartment and commercial area in the last fifteen years. The change was largely a result of the city's overall and downtown growth. The area's crime rate exceeds that of most areas in the city.

The crimes considered in the study were residential break and enter, wilful damage (vandalism) and theft from vehicles. The number of these crimes far exceeds the number of others which could have been considered. Furthermore, these property crimes of opportunity were thought to be especially controllable by design and management intervention strategies to reduce their number.

Nineteen buildings (elevator and walk-up) originally were selected for detailed analysis in the study. Owners of thirteen buildings were willing participants.

There is greater emphasis on identifying useful crime prevention strategies at the individual development scale than at the neighbourhood scale. That direction was chosen after the preliminary analysis revealed this particular community was organizationally weak. Individual residents of buildings (the potential victims) and building owners/managers (those with a financial stake in the area) are the ones most directly affected by an increasing amount of area crime. Consequently, they are the ones who most likely can be motivated to assume greater responsibility for crime prevention.

The recommendations made from the study are written for use by the specific groups participating in the provision and occupation of the housing product and policing of the area: residents, building owners and managers, designers and planners, and policing services. The approach is based on two premises. One is that effective crime prevention relies upon acceptance of a shared responsibility for action by the above named groups. The other is that a coordinated, multi-faceted program of strategies is more likely to achieve the goal of prevention than any particular individual tactic.

1.3 ORGANIZATION OF THE DOCUMENT

The details of the study and its recommendations are presented in the next five chapters.

Chapter 2.0, THE STUDY AREA, describes the Connaught-West Victoria district next to downtown Calgary, which was the location of all the case study buildings considered in this study. The district typifies the long established inner city area dramatically altered by the process of city growth and suburbanization. The chapter first highlights area crime and identifies particular offenses demanding attention in the area: break and enter, theft from vehicles and vandalism. It then describes the crime related attributes of the district and the area population, as well as typical features of the area's residential buildings. It concludes by listing area assets and liabilities which would affect the approach and choice of particular strategies to reduce residential property crimes in this and similar districts.

Chapter 3.0, THE CASE STUDY BUILDINGS, presents the basis for using the case study approach in the balance of the study, and for selecting the particular buildings. The selected low crime and crime prone buildings are described according to a list of characteristics which illustrates the structures are representative of most types of high density apartment buildings in the area.

Chapter 4.0, THE SURVEY PLAN, describes the methodological basis for the survey plan and the specific tools used to complete the in-depth study of each of the buildings which comprised the study group. Eight sources of information enabled formulation of a balanced viewpoint of positive and negative design and management attributes found at the individual buildings. The role of the respondent sources, the survey tools and the organization and content of the individual surveys are described in the chapter.

Chapter 5.0, DATA COLLECTION AND ANALYSIS, documents and details findings from the surveys implemented at the case study buildings. The chapter first comments on an analysis of reported crimes at these buildings, and an offender's approach to "the business". Then, using an extensive list of positive design and management variables as benchmarks, the chapter documents the extent to which these conditions existed at the buildings. A point by point comparison of the low crime and crime prone settings identified conditions most likely contributing to the reduction or elimination of opportunity for successful commission of the crimes in question.

Chapter 6.0, RECOMMENDATIONS, translates the findings of the previous chapter into general guidance and particular strategies to strengthen prevention against the problem crimes in these and similar apartment buildings. The intent has been to extend the usefulness of the recommendations beyond the study area. The recommendations are organized around five main variables thought

to contribute to a potential offender's success. One course of action may be effective for several problems, and recommendations are cross-referenced to specific settings in the apartment environment.

The appendices present statistical support for the findings and conclusions presented in Chapter 2.0. In addition, an extensive literature search and record copy of all survey tools are contained in the appendices section.

1.4 PREVIOUS INVESTIGATIONS

In the book Design for Safe Neighbourhoods[1], Richard A. Gardiner writes that the individual crime environment problem is the end-of-the-line result of a situation made possible by conflicting environmental conditions and uses. These conflicts are viewed as a by-product of urban growth and change which can have the effect of eroding the physical and social balance of the successful residential neighbourhood.

"While there is no universally agreed to dimension, shape or form to a neighbourhood, the successful neighbourhood does have certain common physical and social characteristics:

- It is a place where an individual has certain inherent personal and property rights, which include control over his home or business and their immediate surroundings.

- There are certain unstated standards of behaviour based upon community interests, concerns and group values.

- There are certain essential public and private support services such as roads, utilities, schools, parks, shops.

- The successful neighbourhood has particular physical boundaries and focal points which, while perhaps not clearly readable to the non-resident, provide a sense of place or personal identity for the resident.

- There is pride of home and neighbourhood which may be expressed by support of the high school football team, for example, or by maintenance of private property.

- A successful neighbourhood is also a place where the individual will invest in a home or start a new business.

- Finally, there is a sense of security which is intrinsically a part of the notion of home as a safe place."[2].

---

1. Gardiner, Richard A., Design for Safe Neighbourhoods United States Government Printing Office, Washington, D.C., 1978.

2. Ibid p. 6,7.

These positive characteristics are found in too few neighbourhoods. The Connaught-West Victoria district in Calgary typifies the long established inner city neighbourhood affected by the process of Calgary's growth and suburbanization. Redevelopment pressure and the mass movement of individuals and families has initiated a process of change and evolution which has largely eliminated the ingredients of the successful neighbourhood and paved the way for increased crime. There is increased competition for the use of land and services within the area by local residents and by people from other parts of the City. The area is never free from the constant intrusion of traffic and people from outside the area. Familiarity among neighbourhood residents is declining.

During the past 20 years there have been three major conceptual models which have dealt with design of the safe environment: the urban village, the urban fortress and the defensible space concept.

The "urban village" model identifies social disorganization as the primary cause of crime, and makes a strong case for relating physical design to the social mechanisms of recognition, neighbouring and mutual protection. However, the model depends primarily upon social homogeneity to achieve the behaviours considered essential for effective neighbourhood crime preventions. It does not recognize the socially heterogeneous neighbourhood common in today's urban communities.

The "urban fortress" model represents a view of crime prevention which places sole reliance on securing buildings and areas so outsiders cannot gain access without approval. In certain places this view has gained widespread acceptance because of severe crime problems, its practicality and seemingly immediate results. The approach implies that streets are largely the province of criminals and that residents are powerless to prevent victimization. The approach has been shown to have the potential of raising as many problems as it solves, including increasing resident fear, indifference to neighbourhood life and problems, and relegation of neighbourhood control to the police.

The "defensible space" approach popularized by Oscar Neuman promotes the concept that design of the physical environment has the capacity to deter or facilitate crime by enhancing the resident's ability to monitor and control his own environment. The approach is predicated on the assumption that individuals can recognize criminal activity and will intercede in some way to thwart the offender. Application of this model has been confined largely to public housing projects exhibiting severe crime problems.

The need for individual and group territoriality, or sense of place, is a recurring theme in each model. "In its simplest form, territoriality is characterized by three conditions:

- The resident feels a proprietary interest and responsibility over areas beyond his front door, a responsibility shared by his neighbours.

- The resident perceives when this territory is potentially threatened by the intrusion of strangers and is willing to act on that perception.

- A potential offender perceives that he is intruding on the domain of others, will be noticed if he intrudes and, therefore, is more likely to be deterred from criminal behaviour."[1]

The formation of these conditions is widely regarded as one of the two keys thrusts in achieving a safe and viable neighbourhood and building environment.

The second key thrust considered essential is the restructuring of the environment, so that the would-be offender has to go out of his way and make an exception to his routine activities to find a target and commit an offense. The redevelopment of a program of strategies towards this end requires identification of a number of area features:

- The volume, geographic distribution and patterns of the key problems offenses;

- The transportation network and land use conflicts which weaken the identity and cohesiveness of the neighbourhood for its residents, encourage its misuse and exploitation by non-residents and present opportunity for would-be offenders to move freely in the area;

- The lifestyle of residents, as a determinant of the interest in and felt responsibility for control over what happens in the neighbourhood and residence, and the opportunity there is for would-be offenders;

- The opportunity for would-be offender access and unrestricted movement within individual buildings.

This study was predicated on the assumption that in high density areas and buildings, the opportunity for successful commission of key property crimes could be reduced or eliminated through specific strategic responses to the conditions found in an area or building.

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1. Gardiner, Richard A., Design for Safe Neighbourhoods, United States Government Printing Office, Washington, D.C., 1979, p. 19.

1.5 RESEARCH METHODS AND SOURCES

Archival data collection, surveys (questionnaires and interviews) and observation were the methods used to obtain the information presented in Chapters 2.0, 3.0 and 5.0 of the document. The data was collected in three main cycles, all preceded by an extensive literature search which is included as an appendix.

Experts, officials, managers or organizations involved in both the delivery of crime prevention programs and the management of high density properties were interviewed at the outset of the study. An overview of crime prevention activities related to residential areas and owner/manager perspectives on the study area and its buildings were obtained from the interviews.

The findings presented in Chapter 2.0, and the choice of buildings listed in Chapter 3.0 were based on information derived from several sources. City wide, area and building crime statistics were obtained with the assistance of the Calgary Police Service, its PPAS[1] and PIMS[2] data bases. The physical profile of the study area and buildings was drawn from Calgary Planning and Building Department policy and zoning documentation, and site inspection. Population data, social and economic factors were drawn from Statistics Canada, the Alberta Bureau of Statistics and the Calgary Planning and Building Department.

The survey and analysis of case study building in Chapter 5.0 employed all research methods. The details of key crimes were based on offense report analysis, supplemented by the opinions of a convicted offender interviewed during the study. The physical characteristics of the case study buildings were supplemented by additional information from residents and managers of those buildings who answered questionnaires. Details of design and management conditions were obtained from plan review, site inspections and responses to survey and interviews.

1.6 TREATMENT OF FINDINGS

Crime prevention is everyone's responsibility, and acceptance of that responsibility is a prerequisite to effective crime prevention. A multi-pronged attack on a clearly identified crime problem is likely to be more effective than a singular independent intervention. These are key assumptions made by this study and they are the basis for organization of the recommendations made in Chapter 6.0. Two subsequent actions are recommended for the findings from this study.

---

1. PPAS means Preventative Policing Analysis Systems.
2. PIMS means Police Information Management Systems.

First, and most importantly, ways must be found to transmit the relevant findings from this study to those particular groups who have an interest in and responsibility for crime prevention in high density housing environments. These are residents, owners/managers, designers/planners, policing services and other specialized public agencies and community-based interest groups. The methods of distribution might include: individualized, pamphlet-type products directed at residents, owner/managers, designer/planners; seminar-type presentations to inform, stimulate and advise owners/managers, designers/planners and special interest groups; and round-table discussions with the appropriate representatives of policing services.

Second, a pilot crime prevention program should be designed and implemented at a single crime-prone environment, monitored over a period of time, and assessment made of its real benefits versus the cost of such a program. This approach is probably the only way of answering the question which has always plagued advocates of crime prevention: how much does it cost and how is it effective?

2.0 THE STUDY AREA

The Connaught-West Victoria community (or the "Beltline" as it is more commonly known) is a residential area next to downtown that is facing a challenge. At a time when crime is decreasing on all fronts in the City, crime in this particular high density community continues to increase. Crimes against property, which are largely opportunistic in nature, are especially significant in the context of the total crime picture. Area crime, and pertinent physical and social characteristics which are likely contributing to area crime are profiled in this section.

The identification of workable residential design and management strategies and to assist in the alleviation of the key property crime problems is the goal of this project. If implemented, the strategies should have the beneficial effect of reducing the opportunity for successful property offenses in the area's residential buildings and in other similar residential settings. There are actions which could be initiated at the City, district and building scales to address the area's key crime problems, and this section notes those possibilities.

2.1 AREA BOUNDARIES

The area boundaries selected for the purpose of this project are:

- 10th Avenue S.W. on the north
- 1st Street S.E. on the east
- 17th Avenue S.W. on the south
- 14th Street S.W. on the west

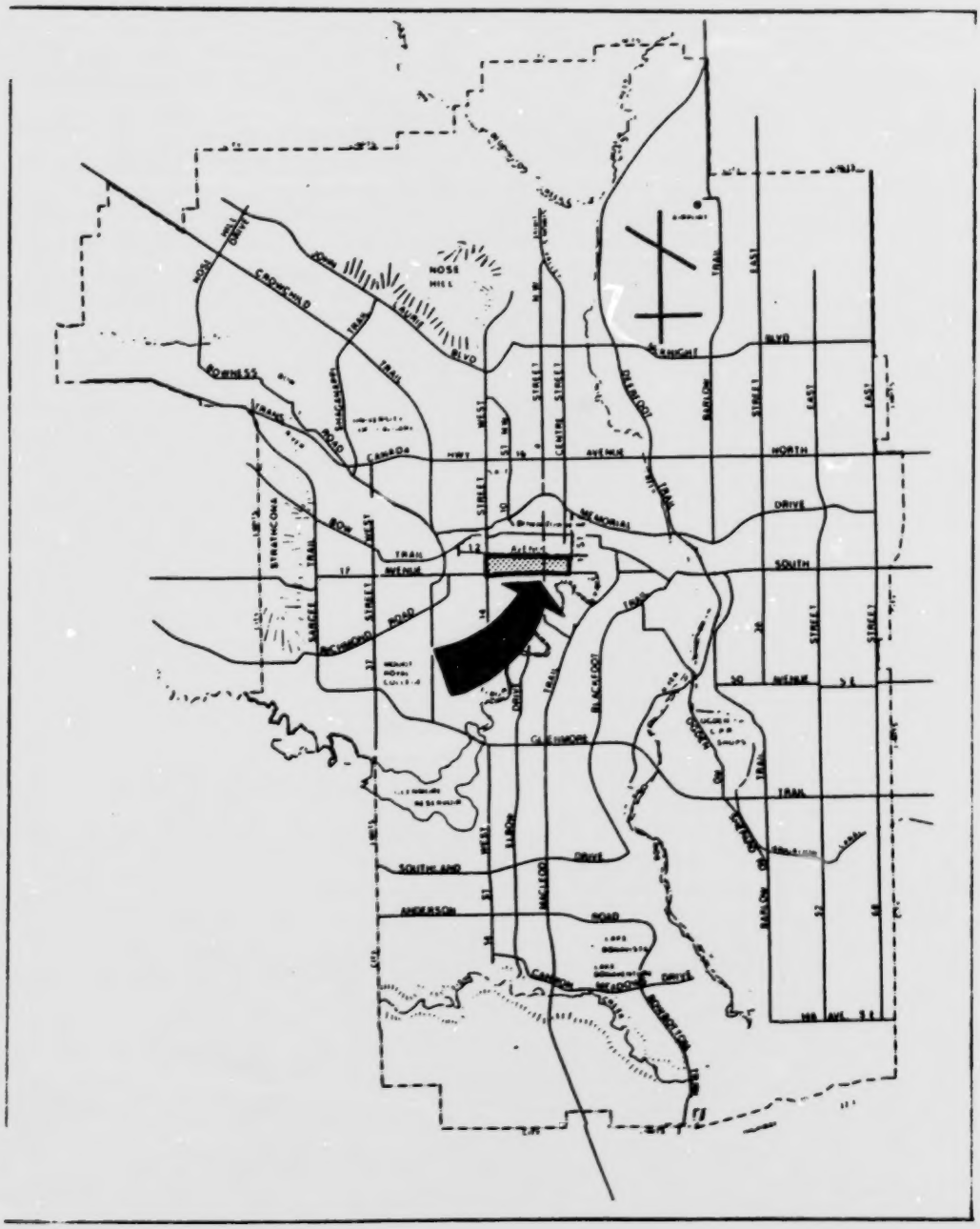
The boundaries encompass all of the Connaught-West Victoria community and that portion of the Downtown between 10th Avenue S.W. and 12th Avenue S.W. called South Downtown. The area is shown in relation to the City on MAP 2.1 CITY CONTEXT and to the surrounding districts on the MAP 2.2 LOCATION OF THE STUDY AREA.

To the north is Downtown Calgary, the chief employment center in the City. Downtown is a daily destination for thousands of employees and visitors for other purposes. To the east is Victoria Park, an older residential area in transition, and the Calgary Exhibition and Stampede Grounds. South of the study area is Lower Mount Royal, a medium density, predominantly middle income residential area. To the west of 14th Street are Sunalta and Bankview, two medium density areas of mixed income residents.

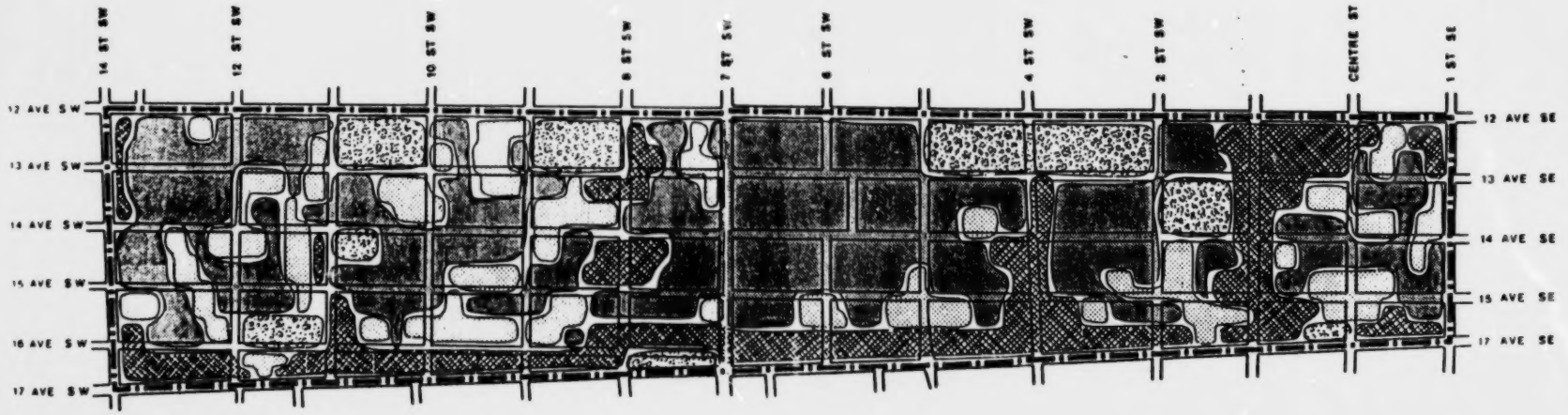
2.2 STUDY AREA CRIME

Analysis of trends in crime on a City-wide basis and for the Connaught-West Victoria area show considerable trend variation between the two during the past five years. Despite the variation, crimes against property rather than against the person always contribute the largest portion of all crime. Among

MAP 2.1
CITY CONTEXT



MAP 2.2
LOCATION OF THE
STUDY AREA



CONNAUGHT/
WEST VICTORIA
ARP

Fig. 8

GENERALIZED EXISTING LAND USE

HOUSES & VACANT SITES
COMMERCIAL
PUBLIC & EDUCATIONAL
APARTMENTS

OCTOBER 1982

residential crimes[1], wilful damage to property, theft from vehicles, and break and enter are the leading offenses which are demanding attention in this community.

2.2.1 City and Area Crime Trends

During the past five years crime has increased in absolute numbers for nearly all categories. During this period Calgary experienced a 17 percent increase in population, to 620,700. When the growth of resident population is accounted for (by expressing each offense on a per 100,000 population basis) the analysis shows an overall decrease in the rate for most property crimes excepting theft over and under $200, and marginal increases for crimes against the person. TABLE 2.1 presents statistics describing changes in Calgary crime for the years 1979 and 1983. TABLE 2.2 presents the same information for the Connaught-West Victoria district.

While it is not evident from the information presented in TABLE 2.1, an inspection of the annual City Police Service reports for 1980, 1981 and 1982 reveals the decrease has not been constant over the entire 1979-1983 period. In fact, between 1979 and 1980, the City experienced large increases in crime and especially property crime. Particularly large in their growth rate were break and enter, theft over and under $200 and motor vehicle theft.

Fortunately, this growth pattern has not held during the ensuing years to the present day. Between 1980 and 1981 a slowdown began in both the numerical and percentage increase in property offenses. The pattern of change became one of real decline in nearly all categories of property offenses between 1981 and 1982, and between 1982 and 1983.

As can be seen from examining TABLE 2.2, the study area has not enjoyed the reduction in crime rate which has occurred on a City-wide basis. In Connaught-West Victoria, there has also been an increase, in absolute numbers, of nearly all crimes during the period 1979-1983. Contrary to the City's population growth there has been very little increase in the study area population. As a result, there also has been an increase in the rate per 100,000 population for all crimes. Particularly noteworthy are the following crimes: theft over and under $200 (total), residential break and enter, robbery and theft of motor vehicles.

---

1. Residential crime includes any of the following crimes when they occur in predominantly residential environments: break and entry (burglary), robbery, theft, motor vehicle theft, vandalism, arson, trespass, indecent assault, rape, and homicide and attempted murder. Consortium of Urban Design Consultants and The Research Group (1982) The Environmental Design and Management (EDM) Approach to Crime Prevention in Residential Environments, prepared for the Department of the Solicitor General, Canada and Canada Mortgage and Housing Corporation, Ottawa, p. iii, Executive Summary.

TABLE 2.1

CHANGES IN CRIME - CITY OF CALGARY

1979, 1983

OFFENSES	ACTUAL NO.		RATE/100,000 POP.		CHANGE IN RATE/ 100,000 DURING 5 YEAR PD.
	1983	1979	1983	1979	
HOMOCIDE TOTAL	48	33	7.7	6.2	+1.5
SEXUAL OFFENSES TOTAL	367[1]	308	59.1	58	+1.1
ASSAULTS (not ind.) TOTAL	2,497[1]	2,036	402	383	+19
ROBBERY TOTAL	587	453	94.5	85.3	+9.2
BREAK AND ENTER TOTAL	8,562	7,828	1,379	1,474	-95
Business Premises	2,258	2,215	363[2]	417[2]	-54
Residence	3,974	3,523	1,602	1,730	-128
Other	2,330	2,090	375	393	-18
THEFT MOTOR VEHICLE TOTAL	2,447	2,520	394	474.7	-80
THEFT OVER & UNDER $200 TOTAL	24,328	17,942	3,919	3,379	+540
FRAUD TOTAL	3,113	2,213	501	416	+85
OTHER CRIMINAL CODE TOTAL	10,472	8,440	1,687	1,589	+98
FEDERAL STATUTES - DRUG TOTAL	1,180	1,628	190	306	-116
TOTAL	53,601	43,401			

[1] Denotes 1982

[2] Denotes Rate per 100,000 targets

TABLE 2.2

CHANGES IN CRIME - STUDY AREA (POLICE ZONE 1-5)

1979, 1983

OFFENSES	ACTUAL NO.		RATE/100,000 POP.		CHANGE IN RATE/ 100,000 DURING 5 YEAR PD.
	1983	1979	1983	1979	
HOMOCIDE TOTAL	1	0	8.6	0	+8.6
SEXUAL OFFENSES TOTAL	19[2]	7	167.8	67.9	+95.6
ASSAULTS (not ind.) TOTAL	89	64	766	620	+146.0
ROBBERY TOTAL	42	16	361.5	155.2	+206.3
BREAK AND ENTER TOTAL	362	277	3,116	2,686	+430
Business Premises	121	104	1,041	1,008	+33
Residence	185	120	1,994	1,576	+428
Other	56	53	456	543	-87
THEFT MOTOR VEHICLE TOTAL	105	76	903.8	737.2	+166
THEFT OVER & UNDER $200 TOTAL	944	601	8,126	5,829	+2,297
FRAUD TOTAL	116	94	998	911	+87
OTHER CRIMINAL CODE TOTAL	56	53	456	543	-87
FEDERAL STATUTES - DRUG TOTAL	25	41	215	397	-182
TOTAL	1,759	1,229			

1 Police Zone 1-5 includes all of the Study Area west of 4 St. S.W.

2 Denotes 1982

TABLE 2.3 LEADING PROPERTY CRIMES - CITY and TABLE 2.4 LEADING PROPERTY CRIMES - STUDY AREA list the five leading offenses among the complete list of crimes considered to be most susceptible to the Environmental Design and Management approach to crime control[1] (see APPENDIX A: EDM TARGET CRIMES).

As can be seen from examining both TABLES 2.3 and 2.4 the five leading offenses in 1979 are the same leading offenses in 1983 for both the City and the study area. The percentage changes within the five leading offenses are of a minor nature. The figures for the entire City show that these five property crimes constituted 63.7 percent of all EDM crime in 1979, and 67.4 percent in 1983. For the Connaught-West Victoria area the same five offenses grew from 58.2 percent of all EDM crime in 1979 to 68.8 percent in 1983. It is interesting to note that the listed property offenses constitute about two thirds of all EDM crime, regardless of an increasing or declining crime rate. Further, a large proportion of these listed property offenses must occur in residential areas, since the figures portray the situation as it exists in the entire City as well as in a largely residential area.

In view of the above-noted findings, and in the opinion of the Calgary Police Service, finding ways to reduce the opportunity of wilful damage (vandalism), theft from vehicles and break and enter in this residential area would have several beneficial effects. There would be the obvious benefit of a likely major reduction in the overall crime rate possibly bringing the pattern more in line with the downward trend of crime in the entire City. Police manpower could be redirected to coping with crime not considered susceptible to the EDM approach to crime control. Further, personal property losses would be substantially reduced.

2.2.2 Distribution and Location of Target Crimes in the Study Area

a) Wilful Damage (Private)

Wilful damage (private) or vandalism means unlawful damage without theft to privately owned property regardless of location. In Calgary, vandalism is classified into offenses under $50 and offenses over $50. Wilful damage to an individual's vehicle in an apartment parking area, to mailboxes in a lobby area, or to security hardware on an exit door are examples of vandalism commonly occurring in the Connaught-West Victoria area. TABLE 2.4 showed that the reported number of vandalism offenses (237 in 1983) exceeded the reported number of all other individual EDM crimes in the study area.

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1. Consortium of Urban Design Consultants and The Research Group (1982) The Environmental Design and Management (EDM) Approach to Crime Prevention in Residential Environments, prepared for the Department of the Solicitor General, Canada and Canada Mortgage and Housing Corporation, Ottawa, p. 372.

TABLE 2.3
LEADING PROPERTY CRIMES - CITY

Offense	1983 Number	1983 % of EDM Target Crimes	1979 Number	1979 % of EDM Target Crimes
1. Wilfull Damage Private	5,838	16.5%	5,711	17.8%
2. Theft Under $200 from A Motor Vehicle	5,186	14.7%	4,474	14.8%
3. Theft Over $200 from A Motor Vehicle	4,894	13.8%	2,610	8.7%
4. Residential B & E	3,974	11.2%	3,523	11.3%
5. Theft Under $200 - Other	3,963	11.2%	3,360	11.1%
	23,855	63.7%	19,678	67.4%

TABLE 2.4
LEADING PROPERTY CRIMES - CONNAUGHT-WEST VICTORIA

Offense	1983 Number	1983 % of EDM Target Crimes	1979 Number	1979 % of EDM Target Crimes
1. Wilfull Damage Private	237	16.2%	165	16.2%
2. Theft under $200 from a Motor Vehicle	216	14.7%	117	11.5%
3. Theft Over $200 from a Motor Vehicle	204	13.9%	66	6.5%
4. Residential B & E	185	12.6%	120	11.8%
5. Theft Under $200 - Other	167	11.4%	125	12.2%
	1,009	68.8%	593	58.2%

A one hundred percent sample of vandalism under and over $50 for the years 1981, 1982 and 1983 was reviewed to ascertain the intensity of the offense on a building-by-building basis in the area. TABLE 2.5 FREQUENCY OF VANDALISM OFFENSES AT AREA ADDRESSES presents the findings.

TABLE 2.5
FREQUENCY OF VANDALISM OFFENSES AT AREA ADDRESSES[1]
(UNDER $50)

1981		1982		1983[2]	
No. of Reported Offenses	No. of Area Addresses	No. of Reported Offenses	No. of Area Addresses	No. of Reported Offenses	No. of Area Addresses
1	32	1	11	1	16
2	3	-	-	-	-
TOTAL		TOTAL		TOTAL	

(OVER $50)

1981		1982		1983[2]	
No. of Reported Offenses	No. of Area Addresses	No. of Reported Offenses	No. of Area Addresses	No. of Reported Offenses	No. of Area Addresses
1	162	1	147	1	52
2	28	2	24	2	3
3	5	3	11	3	1
4+	3	4+	2	4+	-
	TOTAL		TOTAL		TOTAL

The table indicates the incidence of reported offenses is consistently low at a large majority of addresses. No address reported more than four offenses. Nearly all addresses reporting multiple offenses are non-residential. It appears that while vandalism is widespread in the area, it is not intense at any particular address. The drop of wilful damage to property offenses when vandalism to vehicles was reported separately indicates that the majority of reported vandalism offenses during 1981 and 1982 were vehicle related rather than to other types of private property.

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1. Only wilful damage offenses reported at a specific municipal address are shown in the table. An individual offense may have occurred within a building, outside on the building site or on public land next to the building site.

2. Beginning in 1983, vandalism offenses to vehicles were listed in a separate offense category, which explains what appears to be the large decrease in offenses during 1983.

Police officers who work in the area were canvassed for their opinion based on direct experience about specific buildings or areas where vandalism was prominent. While the statistics do not indicate a high incidence of the offense at any of the sites, the areas mentioned were:

- 1300 block of 8th Street S.W.
- 1100 block of 6th Street S.W.
- 600 block between 10th and 17th Avenue S.W.
- 4th Street to 8th Street along 13th and 14th Avenues S.W.
- 1300 block of 12th Avenue S.W.
- 1300 block of 13th Avenue S.W.

b) Theft From Vehicles

Theft from a motor vehicle means the unlawful removal of parts or goods from the exterior or interior of the vehicle, regardless of its location on public or private property. Examples of theft from a motor vehicle include stealing hubcaps from the exterior, engine parts from under the hood, audio equipment or personal belongings from the interior compartment.

Theft from a motor vehicle under $200 and over $200 rank second and third among the leading property crimes in the area. As is evident in TABLE 2.4, together these two similar offenses constituted 28.6 percent of all EDM related crimes in the area during 1983.

The intensity of theft from vehicles on a building-by-building basis was ascertained in similar fashion to the foregoing analysis of wilful damage. The addresses given for all reported thefts from vehicles (total under and over $200) between October 1982 and December 1983[1] were correlated to produce TABLE 2.6 DISTRIBUTION OF THEFT FROM VEHICLE OFFENSES AT AREA ADDRESSES.

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1. Prior to October 1982 theft from vehicles was not tabulated on machine and was unavailable for review.

TABLE 2.6
DISTRIBUTION OF THEFT FROM VEHICLE OFFENSES AT AREA ADDRESSES*
OCTOBER 1982 - DECEMBER 1983

Under $200		Over $200	
No. of Reported Offenses	No. of Area Addresses	No. of Reported Offenses	No. of Area Addresses
1	99	1	83
2	9	2	17
3	5	3	5
4	7	4	2
5+	8	5+	10
TOTAL OFFENSES:	231	TOTAL OFFENSES:	239

* Where only a block address was cited, e.g. 600 - 12 Ave., the address was not included in the above tabulation.
Any of the reported thefts may have occurred in internal or external areas on private property, or on public property next to the address cited.

The distribution of theft from vehicles portrays a situation very similar to the distribution of vandalism which was found to be primarily vehicle related. The largest proportion are reported offenses from individual addresses, indicating a widespread, low intensity pattern of distribution throughout the study area. However, TABLE 2.6 does show an increase in the number of locations where multiple offenses were reported. At eighteen (18) addresses five or more offenses were reported during the 15 month period, with several locations reporting more than 10 offenses.

In the opinion of area police officers, vehicles in open and covered parking lots are most vulnerable to the offense, while vehicles parked on the street or in enclosed, access controlled parking structures are least vulnerable. Key problem areas identified by police officers include the:

- 1300 block of 8th Street S.W.
- 1300 block of 12th Avenue S.W.
- 600 block of 13th Avenue S.W.
- 600 block of 14th Avenue S.W.
- 1200 block of 14th Avenue S.W.
- 1000 block of 16th Avenue S.W.

FIGURE 2.1 DISTRIBUTION OF THEFT FROM VEHICLES IN STUDY AREA BY MONTH OF YEAR graphically illustrates the distribution of offenses in the study area during 1983.

Only a general trend can be drawn from the figure. The largest number of offenses were committed during May, and the least number during December of 1983. During January, July and October, the offenses reported were mid-way between the low and high noted above. During other months a lesser number of offenses were reported.

FIGURE 2.1

DISTRIBUTION OF THEFT FROM VEHICLE OFFENSES IN
ZONE 1-5* OF STUDY AREA BY MONTH OF YEAR

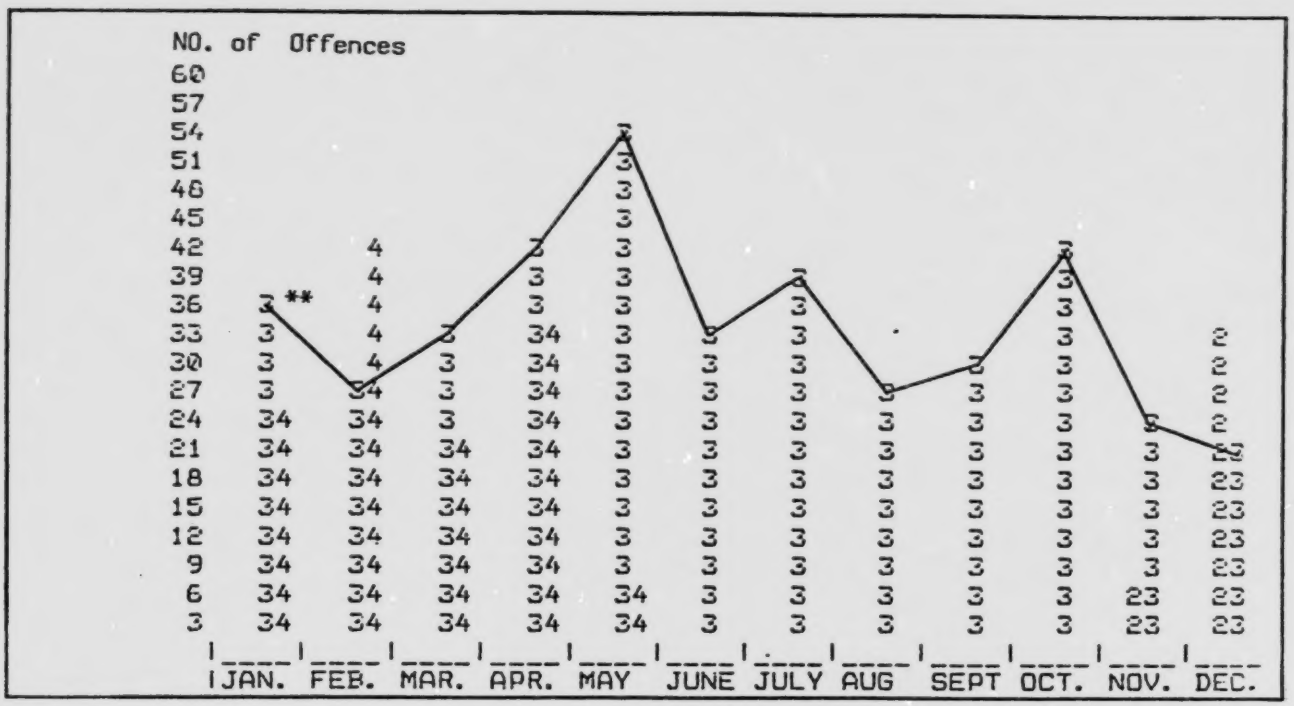

TABLE 2.7 DISTRIBUTION OF THEFT FROM VEHICLES IN THE STUDY AREA BY DAY OF WEEK shows the percent distribution of reported offenses for 1983. The table indicates a largely uniform distribution of reported offenses throughout the entire week.

TABLE 2.7
DISTRIBUTION OF THEFT FROM VEHICLES
BY DAY OF WEEK (ZONE 1-5)

Day	No. of Offenses	Percentage of Total Offenses
MO	60	14%
TU	60	14%
WE	68	16%
TH	57	13%
FR	56	13%
SA	59	13%
SU	64	15%
TOTAL	124	100%

TABLE 2.8 DISTRIBUTION OF THEFT FROM VEHICLES IN THE STUDY AREA BY TIME OF DAY shows the percent distribution of reported offenses for 1983. Nearly eighty percent of all reported thefts from vehicles occurred between the hours of 4 in the afternoon and 4 in the morning. The number of offenses peaked between eight in the evening and midnight. The early morning and work-day period accounted for only 17 percent of the thefts from vehicles.

TABLE 2.8
DISTRIBUTION OF THEFT FROM VEHICLES
BY TIME OF DAY (ZONE 1-5)

Times	No. of Offenses	Percentage of Total Offenses
00-04	73	17%
04-08	7	1%
08-12	27	6%
12-16	44	10%
16-20	122	28%
20-24	151	35%
TOTAL	424	100%

c) Residential Break and Enter

Residential break and enter means the unlawful forced entry into a private residence. The most common reason for residential break and enter is for the theft of property, but damage or destruction of private property and goods is also a frequent result of the offense.

TABLE 2.4 ranked break and enter, at 12.6 percent of all EDM crime, as the fourth leading property offense in the Connaught-West Victoria area in 1983. Despite its lower ranking on the numerical basis, the study of break and enter in the area is of particular interest to the police service for a number of reasons:

- Its impact on the victim can be similar to that of a crime against the person.

- The risk of break and enter in the area is twice the rate for the City, and it ranks among the highest risk areas in the City.

- The offense can be linked to a specific address and in-building location in relation to a specific set of environmental and management conditions. (Given these conditions, there is the potential of reaping the most understanding of site/building design and management in relation to the offense.)

- The clearance rate[1] on residential break and enter is two to three times greater than the clearance rate for the other offenses and more information is known about the circumstances relating to the event.

TABLE 2.9 summarizes the distribution of break and enter offenses at area addresses for 1981, 1982 and 1983.

TABLE 2.9
BREAK AND ENTER OFFENSES AT AREA ADDRESSES 1981-1983*

1983		1982		1981	
No. of Reported Offenses	No. of Area Buildings	No. of Reported Offenses	No. of Area Buildings	No. of Reported Offenses	No. of Area Buildings
1	65	1	82	1	91
2	18	2	28	2	26
3	8	3	11	3	8
4+	13	4+	12	4+	15
TOTAL OFFENSES 232		TOTAL OFFENSES 248		TOTAL OFFENSES 244	

* The offenses are all those in Police Zone 1-5 and that portion of Police Zone 1-4 which is located in the study area.

During the past three years there has been a marginal decrease in the total number of break and enter offenses in the area. However, the figures for 1983 are considerably higher than 1979, and this is significant considering the absence of a noticeable increase in population.

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1. "Clearance rate" means the percentage of reported offenses which result in conviction of the offender.

The distribution of offenses at addresses is similar to the patterns for vandalism and theft from vehicles. One or two offenses are committed in a large number of area buildings and multiple offenses occur at a comparatively smaller number of buildings. Twenty-nine buildings reported more than five offenses during the past 3 years, and in half of these buildings more than 10 offenses were committed during the 3 year period. Fifty-three offenses were committed at one particular address.

The location of each residential break and enter offense in the study area during the past three years was plotted. The mapping showed there is a generally uniform distribution of locations throughout the entire community where one or more residential break and enter offenses have occurred during the past three years. The analysis also indicated that those buildings where the highest absolute number of residential break and enter offenses occurred are, for the most part, located on or near the major traffic streets and/or commercial areas: 10th Avenue, 12th Avenue, 15th Avenue, 1st Street, 4th and 5th Streets, 8th Street and 14th Street S.W.

FIGURE 2.2 DISTRIBUTION OF AREA RESIDENTIAL BREAK AND ENTER BY MONTH OF YEAR shows the distribution of offenses during the year for the past 3 years. Only general trends can be drawn from the figure. If the anomalies[1] of each year are discounted from the figure, offenses are highest during July and August and lowest in April, May and December. No analysis has been undertaken which correlates the presence or absence of a resident during a break and enter offense at any one address. However, a common assumption is that house break and enter is at its highest when many families and individuals take extended vacations.

TABLE 2.10 DISTRIBUTION OF AREA RESIDENTIAL BREAK AND ENTER BY DAY OF WEEK shows the percent distribution for the study area during 1983. In Police Zone 1-5, encompassing most of the study area, the largest number of offenses occur on Fridays and Saturdays. Monday through Thursday are steady but a lesser number of offenses occur on those days. In Police Zone 1-4, only a part of which is located in the study area, Tuesday accounts for 22 percent of the offenses during the week. Otherwise, the pattern mirrors that of Zone 1-5.

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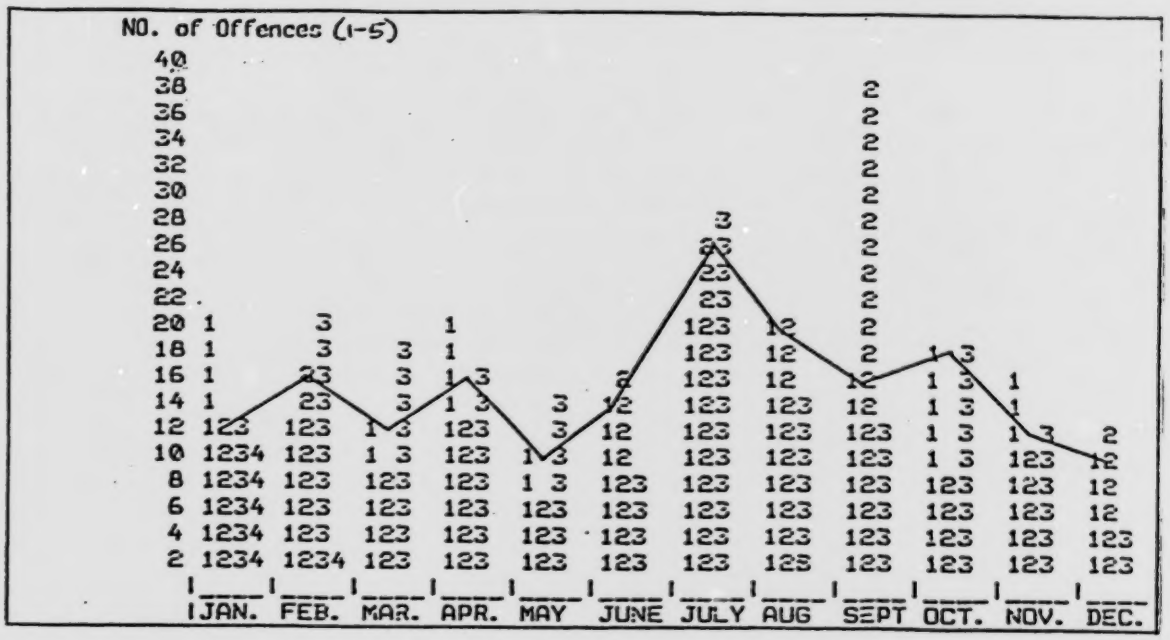
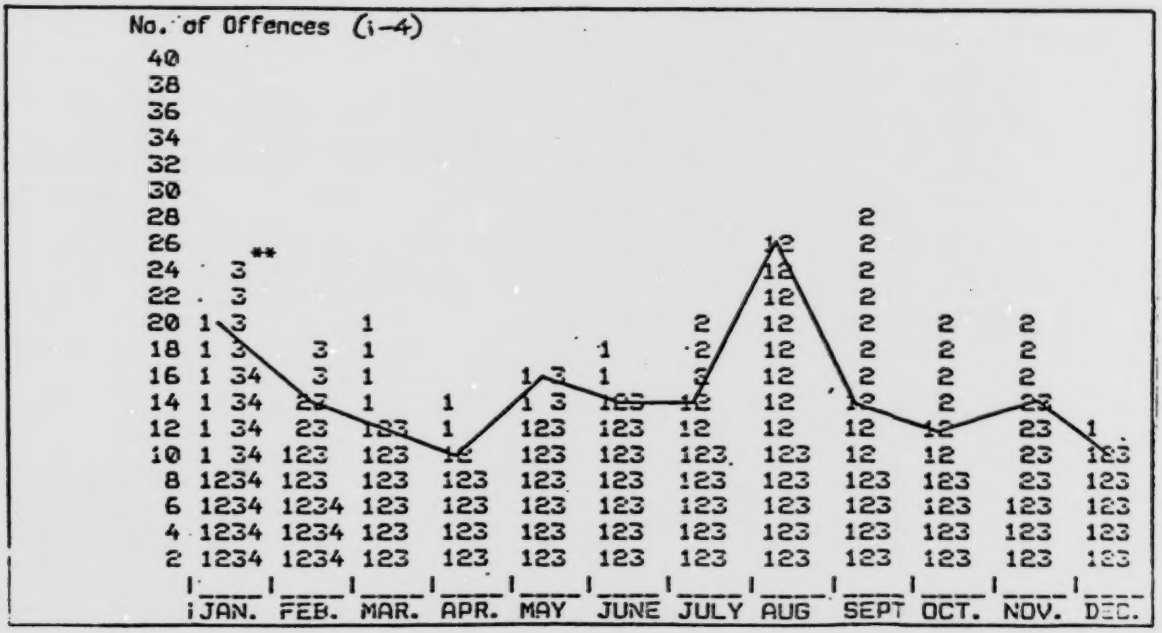
1. One or two offenders particularly active in a narrow time span are usually the cause of an abnormally high peak.

FIGURE 2.2

DISTRIBUTION OF RESIDENTIAL BREAK AND ENTER OFFENSES
IN ZONES 1-4 AND 1-5* OF STUDY AREA BY MONTH OF YEAR





* Police Zones 1-4 and 1-5 include all of the study area as well as an external area to the south and east.

** Year of offense occurrence. For example "3" means 1983.

TABLE 2.10
DISTRIBUTION OF AREA RESIDENTIAL BREAK AND ENTER BY DAY OF WEEK

	ZONE 1-4			ZONE 1-5	
Day	No. of Offenses	Percentage of Total Offenses	Day	No. of Offenses	Percentage of Total Offenses
MO	19	12%	MO	26	14%
TU	34	22%	TU	25	13%
WE	18	11%	WE	22	11%
TH	20	13%	TH	24	13%
FR	27	17%	FR	36	19%
SA	20	13%	SA	32	17%
SU	13	8%	SU	19	10%
TOTAL	151	100%	TOTAL	184	100%

TABLE 2.11 DISTRIBUTION OF AREA RESIDENTIAL BREAK AND ENTER BY TIME OF DAY shows the percentage distribution of offenses for 1983. The table indicates that break and enter activity is:

- consistently high in early morning hours (12-4 a.m.);
- consistently low in late evening hours (8 p.m.-12);
- variable from moderate to highest during the work day (8 a.m.-4 p.m.).

TABLE 2.11
DISTRIBUTION OF AREA RESIDENTIAL BREAK AND ENTER BY TIME OF DAY

	ZONE 1-4			ZONE 1-5	
Time	No. of Offenses	Percentage of Total Offenses	Time	No. of Offenses	Percentage of Total Offenses
00-04	36	19%	00-04	29	19%
04-08	25	13%	04-08	28	18%
08-12	34	18%	08-12	20	13%
12-16	30	16%	12-16	32	21%
16-20	33	17%	16-20	25	16%
20-24	26	14%	20-24	17	11%
TOTAL	184	100%	TOTAL	151	100%

d) Highlights of Area Crime

Analysis of City and study area crime trends and the pattern of key offenses in the study area suggested a number of crime attributes of particular importance to the objective of this study. These are highlighted below.

- Between 1979 and 1983, there have been large increases in the crime rate for most offenses in the study area. The largest increases have been for crimes against property. By comparison, most crime rates for the City during that same period have declined to or are lower than pre-1979 rates. Crime in the City reached a peak on all fronts in 1980.

- During the last five years five specific property crimes, vandalism, theft under $200 from vehicles, theft over $200 from vehicles, break and enter and other theft under $200, consistently accounted for about two thirds of all crime in the study area and in the City. These crimes' share of the total number of offenses seem to remain constant regardless of the amount of crime or fluctuations in the crime rate.

- No portion of the study area is free from any of the offenses.

- Incidents of wilful damage account for the largest number of offenses in the study area. The vandalism is a low intensity but widespread problem. The nature of the offenses appears concentrated principally on damage to vehicles. Reported damage to other private property, e.g. public areas of buildings, is very low but the problem may be more serious than the records indicate. Management companies and organizations earlier reported that vandalism to their properties was a chief concern. It is quite possible that management, rather than reporting the offenses, writes off wilful damage to a building as maintenance costs attributable to general wear and tear on the property. Area police officers have identified several locations where they believe vandalism is more prominent in Connaught-West Victoria.

- For the most part, theft under and over $200 from vehicles is similarly of low intensity but a widespread problem throughout the study area. Several of the locations cited by police officers as being prone to theft from automobiles are in the areas noted as being prone to vandalism. This is not surprising considering that most reported vandalism is vehicle related. During 1983, the highest incidence of theft from vehicles was during May, July and October. Reported offenses are nearly uniform throughout the week, and most of the thefts take place during late afternoon and in the evening.

- There was a slight decrease in the number of break and enter offenses in the area between 1981 and 1983. However, the risk of break and enter is more than twice the risk for the City. The mapping of offenses showed a uniform distribution of locations throughout the area. However, apartments in buildings along busy traffic and commercial streets were subject to repeated attacks during the three year period. The identification of high risk buildings by police officers were substantiated by statistical data on break and enter. Evidence of the past three years shows incidence of the offense is highest during July and August, on Friday and Saturdays, during the early morning hours.

- The reduction of vandalism, theft from vehicles and residential break and enter would have a major impact on the crime rate in the area. Residential break and enter has a significant impact on the victim and among the noted crimes, its reduction is considered the most important challenge.

2.3 THE COMMUNITY SETTING

As far back as 1893, Calgary city limits had extended south and west to include the Connaught-West Victoria district. By 1905, the extension of development both south to 17th Avenue and west to 14th Street was obvious, and by the land boom of 1912, the Connaught community was keeping pace with growth elsewhere in the City. In addition to the many fine institutions which were exclusive to the district, tw an three st rey h mes, wide streets, treed boulevards and large open spaces characterised the Connaught district as an attractive low density residential community[1].

In 1984, the study area is a next-to-downtown district for 12,750 residents, housed predominantly in walk-up apartments and high density high rise apartment buildings. The remaining pockets of single family dwellings and most walk-up apartments will inevitably be developed for new high rise apartments in the future. The excellent remaining development potential is underpinned by an area redevelopment policy[2] and a land use bylaw[3] which promotes high rise apartment development. As pointed out by the major organizations responsible for managing properties in the area, its location relative to a major employment area, good transportation routes and proximity to urban amenities make it desirable for a variety of resident types, and will assure its redevelopment into a mature high density residential community.

2.3.1 Organization of Transportation and Existing Land Uses

In broadest terms, the study area is largely a lower density warehousing district with a few high rise office and apartment buildings north of 12th Avenue, and largely residential comprised of old houses, walk-up apartments and high rise apartment buildings south of 12th Avenue. Local and special purpose commercial uses have developed along the busy peripheral and through traffic streets.

a) Transportation Network

The grid-iron pattern of avenues, streets and rear laneways has been in place since the area developed. These right-of-ways provide access through and within Connaught-West Victoria, and define the framework for its development.

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1. Calgary Planning Department, The Historical Development of the Downtown and Inner City, 1978.
2. Calgary Planning Department, Connaught-West Victoria Area Redevelopment Plan, October, 1982.
3. City of Calgary, Land Use Bylaw 2P80, March, 1981.

Major roads, meant to expedite movement of high volumes of traffic between various areas of the City, bound the study area on all sides and divide it into three parcels of approximately equal area. First Street S.W. and 2nd Street S.W. are designated as collector roads, meant to distribute traffic between major and local roads. All other streets in the area are classified as local and provide access to property within the study area.

b) Land Uses

Residential land use and commercial/light industrial land use share approximately equal areas in the study area. South of 12th Avenue S.W., where most of the housing is located, a density of 158 people per net hectare reflects the compactness of the residential area. Residential buildings (apartments in converted houses, walk-ups and high rises) occupy 62.9 percent of all residentially designated land. Non-residential land use and vacant sites, church and park sites occupy the balance of residentially zoned land.

Among the commercial and light industrial land uses in the study area, two thirds are located north of 12th Avenue and one third south of 12th. First, 4th, 8th and 14th Streets S.W. and 17th Avenue S.W. are the main locations for commercial uses south of 12th Avenue.

Central Park is the only site officially designated for park purposes. Humpy Hollow Park at 17th Avenue and Centre Street, the Haultain School site, St. Stephen's Park and a landscaped strip on 17th Avenue at 8th Street provides additional public open space. The Beltline Recreation Centre (former Y.M.C.A.) located on 12th Avenue provides an important recreational facility for many local and inner city residents. Connaught School and Dr. Carl Safran School are the two major school sites located within the district. Approximately 200 pupils and 50 pupils are enrolled in the respective elementary schools. Fifteen church sites, Colonel Belcher Hospital, the Red Cross Society and the Calgary Women's Emergency Shelter, are the main social/community services taking up the balance of the area. (Areas of existing land uses are summarized in APPENDIX B, TABLE 1 EXISTING LAND USE AREAS and a brief description of the area's land use districts are provided in APPENDIX B, TABLE 2 EXISTING LAND USE DISTRICT AREAS.)

c) Existing Housing Stock

The area's population of 12,750 residents is housed in 7890 dwelling units of all types. A summary of dwellings by type of structure is shown in APPENDIX B, TABLE 3 DWELLINGS BY STRUCTURAL TYPE.

About 65 percent of the dwelling units are apartments in high rise buildings - those which have five or more floors. Twenty eight percent of the area's dwelling units are apartments in buildings of four floors or less. These buildings include structures

designed as apartment buildings such as walk-ups, as well as houses which have been converted to apartment buildings. The small remaining percentage of dwellings are mostly single family and duplex structures.

The Connaught-West Victoria Park Area Redevelopment Plan indicates that the number of single family houses has been declining since prior to 1971. The rate of decline has shown an increase since 1977. Similarly, the number of single family houses converted to apartments and rooming houses has been steadily declining since 1974. At the same time the absolute number of dwelling units increased by 26.8 percent during the period 1971 to 1980.

With few exceptions, all apartment buildings constructed during the past 10 years of active redevelopment have been high rise buildings developed to the maximum allowable density permitted by the Land Use Bylaw. At the present time there are about 127 buildings of five or more floors containing approximately two-thirds of the area's dwelling units. The concentration of construction of new residential buildings has been between 12th and 15th Avenues S.W., from 2nd Street S.W. to 14th Street S.W. A lesser number of developments have been built in the surrounding blocks, due mainly to the extent of commercial intrusion north of 12th Avenue and the transitional nature of these areas, particularly east of 2nd Street S.W.

d) Future Development

The Connaught-West Victoria Area Redevelopment Plan and Core Area Policy Brief[1] guide the study area's future development. The p i y documents promote the intensification of existing residential and commercial land uses with particular emphasis on:

- continuation of existing commercial use designations and redevelopment guidelines to emphasize 17th Avenue S.W. as a shopping street and a major traffic road of City-wide significance, and 1st Street S.W. as a shopping and entertainment street of City-wide significance;

- retention of other existing commercial designations along 10th, 11th and 12th Avenues S.W., 4th, 8th and 14th Streets S.W. to permit construction of redevelopment typified by current commercial projects;

- expenditure of public improvement funds to upgrade the public environment on 17th Avenue, 1st, 4th and 5th Streets and 8th Street S.W.; and

- closure of local streets defined in the plan to create open space or control particular traffic problems.

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1. Calgary Planning Department, Core Area Policy Brief, October, 1982.

2.3.2 Crime Related Attributes of the Study Area

The existing community setting and direction of future development pose a number of problems affecting the area's potential to have the physical attributes of a "successful" neighbourhood and promote a resident commitment to the area:

- Residents in the area are never free from constant intrusion of traffic from outside the area, and the magnitude of intrusion will increase in future. The area is straddled between major destination points and high traffic volume roadways pass around an' through the area. Residential buildings are no more than 2 to 3 blocks from major roads. The grid-iron roadway pattern permits universal traffic infiltration.

- Residents in the area are never free from the constant intrusi^n of people from outside the area, and this will increase in the future. Retail and entertainment uses on bordering and internal streets are City-wide "destinations". Frequently there is anti-social behaviour associated with some uses and which contributes to the fear of crime among some residents. People often walk through the area to their parked cars or to one of the other nearby entertainment destinations on neighbouring streets.

- Certain uses and activity within and surrounding the area are viewed by some to hold attraction for the criminal element or anti-social behaviour, including:

  -- A.L.C.B. liquor stores on 11th Avenue and 1st Street S.W., and 16th Avenue and 11th Street S.W.;

  -- homosexual activity in the vicinity of Central Park and in the vicinity of 13th Avenue and 6th Street S.W.;

  -- a proliferation of late night restaurants and bars, and numerous arcade game shops;

  -- some nightspots on 13th Avenue and 4th Street S.W.; and

  -- vacant, accessible houses dispersed throughout the area frequently occupied by "squatters".

- The inadequate supply of outdoor recreational space, and likelihood of further inadequacies in future, causes residents to look outside the area for informal social/recreational pursuits.

- There is competition for use of an inadequate supply of parking for visitors to commercial uses in the area and visitors to area residents. The growth of resident population (vacant and underdeveloped land permit a doubling of population) and retail/entertainment uses only will increase the competition among residents and non-resident visitors for on-street parking.

- Surrounding residential and non-residential areas are characterised by a high incidence of property crime and limited physical and social stability.

2.4 AREA RESIDENTS

In earlier interviews, management organizations described the area's resident population as a representation of the full spectrum of society living together. Among the residents are some who choose to live in the area's housing stock and others who have no choice. There are young people, transients, the unemployed, residents who work and play outside the area and elderly people wh rare y leave the area. The following comparative statistical analysis underpins the validity of most of management's opinions.

The process of change itself has characterised the area for at least the last 10 years as has been the case in all of Calgary. However, the change in the area has been marked by a shift in the group who lives there rather than that growth of its population which has been the City-wide trend. There are several indicators of this trend, including a major increase in housing supply between 1971-1981, a marginal population increase during the same period, and a decrease in household size. (See APPENDIX B, FIGURE I TOTAL DWELLING UNITS BY TYPE, FIGURE 2 TEN YEAR POPULATION TREND, FIGURE 3 AVERAGE HOUSEHOLD SIZE IN STUDY AREA AND INNER CITY.)

2.4.1 Socio-Economic Description

a) Age, Sex and Marital Status

The composition of the area's population by age and sex in 1984 shows it to be considerably different from the City-wide pattern in several respects (see APPENDIX B, FIGURE 4 AGE/SEX PYRAMID).

- More than half the area's residents are young people between the age of 20 and 34 years of age, compared with one-third between 20 and 34 for the City.

- Males outnumber females in the 20-34 age group in the area, and proportionately with the same group for the City.

- There are few children in the area, and the ratio of children to adults is much lower there than for the City.

- There are proportionately twice the number of senior citizens in the area as compared with the City.

Among the population, nearly equal numbers of singles and married people live in the area whereas on a City-wide basis married people outnumber singles more than two to one (see APPENDIX B, FIGURE 5 MARITAL STATUS IN STUDY AREA AND CITY). As the majority of married people will be residing with their partner, it is likely that singles constitute a majority of area households.

b) Period of Residency

More than two-thirds of the residents have lived in the study area less than five years, whereas for the entire City about one-third of the people have been residents for less than five years (see APPENDIX B, FIGURE 6 POPULATION MOBILITY STATUS IN STUDY AREA AND CITY). The immigrant population of the study area is almost entirely comprised of people who moved there from outside Alberta or Canada. Moves of this magnitude often can have a major destabilizing impact on the individual and/or family group.

c) Income and Housing Costs

Nearly all multiple accommodation in the area is rental and historically the rents have been among the highest in the City. Beginning in the late 1970's many of the projects approved for development were to be condominiumized. However, among those projects which were built most have postponed condominiumization due to the downturn in the economy during the early 1980's. Few owner-investors reside in the area.

The median income of single people living in Connaught-West Victoria is about the same as for singles anywhere in the City (see APPENDIX B, FIGURE 7 INCOME LEVELS IN STUDY AREA AND CITY). The median income of families is about a third less than for the same group in the City. Managers reported that "doubling up" among singles in the area has been a common solution to coping with high rents. More recently, with higher vacancy rates and lower rents, undoubling has occurred for more space and greater privacy.

d) Occupancy

Nearly three-quarters of the area's population works (see APPENDIX B, FIGURE 8 PLACE OF WORK), whereas for the City at large slightly more than half of the population work. More than 90 percent of the study area working population are employed outside the study area. It is unlikely those persons would travel to their place of residence during the day at lunch hour or stop at home on the way to after-work activity.

2.4.2 Crime Related Attributes of the Study Area Population

Review of the area's real growth pattern during the past 10-15 years, and its current socio-economic pattern in comparison with City-wide trends portray a unique resident group. The collective impact of resident characteristics and life style has likely contributed to a decline in the kinds of community interests, concerns and group values usually associated with the "successful" neighbourhood. Furthermore, the socio-economic pattern has likely increased offender opportunity in the area. In particular:

- The community does not have the large, committed, stable population base usually found in those communities where there exists an organizational framework for expression of community interests, outward expression and protection of group values and definition of group concerns.

  Homeownership is almost non-existent; transiency is extremely high; people have been preoccupied with "coping with separation from family and roots" or more recently with "unemployment and financial stress"; mothers with children are not at home seeking out others; unattached males and females are actively meeting social needs elsewhere. Residents are not talking to one another about the place where they live or the problems it has, nor are they making plans for its future.

  In earlier interviews, transiency and the absence of a stake in the community were consistently cited by police personnel as principal deterrents to the creation of successful residential crime prevention programs for higher density areas.

- Responsibility for much of the control over one's own home, immediate environment and for maintenance of property rests with a building owner or resident manager, since the area is almost exclusively a rental community. The treatment of tenants by property owners-managers, their care of the building and commitment to the community will have a bearing on residents' attitudes and behaviour. Until recently, with a growing market and non-existent vacancy rate, owner-managers were preoccupied largely with construction and collecting rent and could risk being less concerned about responding to tenant needs or concerns. Two behaviours characterized the tenant response to the situation: added agressiveness and less concern about other's property by some, and by others a heightened perception that certain buildings and the area generally were an "unsafe place" to live in.

- The presence of a disproportionately large number of young, single males in relation to the large number of young women and elderly residents is likely contributing to fear of crime among some residents and a general absence of a sense of security. During the height of the downtown office boom in 1979-1982 many male construction employees, who are often accused of rowdy and anti-social behaviour, were thought to be living in the area.

  Managers have said they believe the fear of crime, particularly by young women, is a continuing concern among tenants. However, only those occupying higher income accommodation expressed a desire for more than the requisite lobby security door and intercom when choosing an apartment. The absence of market choice in accommodation until recently may have contributed to that conclusion by area managers.

- The extensive vacancy rate of the area's apartments and absence of residents from the neighbourhood during the day are major contributors to offender opportunity in the area. Furthermore, area management organizations have said that among the young and upwardly mobile people over the age of 50 who choose to live in the area, most have well-established social and recreational links elsewhere. Consequently, they spend little time at home or in the community during the evening, and have little interest in it as a social entity.

2.5 APARTMENT BUILDING SITE PLANNING/DESIGN

There are about an equal number of walk-up and high rise buildings in Connaught-West Victoria, however, more than two-thirds of the area's apartments are in high rise buildings. Few walk-up apartment buildings have been built in the area in the past 10 years and most of the older ones may not be representative of current design or building practices elsewhere. The high rise building has come to be the predominant apartment building type in the area. The Area Redevelopment Plan policies in effect, the high density land use district predominant in the area and the resultant economic attractiveness of the high rise building, given the allowable density and bonusing provisions, assure its continued dominance in future.

The principal determinants of site planning and building design in the area are development parcel sizes dictated by block and lot dimensions, requirements of the land use bylaw[1] and other codes in effect at the time of development, and market preferences. APPENDIX B, FIGURE 9 PARCEL DIMENSIONS AND BYLAW REQUIREMENTS describes the development conditions and requirements.

Owners and managers who were interviewed at the outset of the project indicated that aspects of site planning and certain design features of buildings contributed in some way to enhancing the opportunity for successful property crime. The typical high rise and walk-up apartment building features are listed in FIGURE 2.3 FEATURES OF HIGH RISE AND WALK-UP APARTMENT BUILDINGS.

Examples of typical features considered to promote opportunity for crime were:

- too many uncontrolled public access points;
- publicly accessible intercom and mail box systems;
- inadequate buffering from neighbouring occupancies (restaurants and bars) which attract offender types;
- tenant abuse of safety features (for example - intercoms, propped open emergency exit doors, not using security hardware within unit);

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1. To March 1981, Development Control Bylaw 8600.
   From March 1981, Land Use Bylaw 2P80.

FIGURE 2.3
FEATURES OF HIGH RISE AND WALK-UP APARTMENT BUILDINGS

HIGH RISE	WALK-UP
- 30 units or more, five floors or higher.	- 30 units or less, usually three floors.
- Rectilinear floor plate, long dimension facing road.	- Rectilinear floor plate, short dimension facing road.
- Mid-point grade level street-side access to elevator lobby; end point fire stairs to grade.	- End point grade level street entry and fire stairs to grade at street and lane side.
- Combination of open, underground, structured (covered) parking (depending on applicable bylaw and building size), usually accessed from lane.	- Surface parking at rear accessed from lane. - Narrow side yard.
- Landscaped front and side yard, and decks over parking.	- Landscaped front and side yard.
- Refuse storage and pick-up from lane.	- Refuse storage and pick-up from lane.
- Almost always has balcony/unit.	- May/may not have balcony/unit.
- Lobby mail delivery.	- Lobby mail delivery.
- Intercom/resident controlled security lock.	- Door buzzer/resident controlled security lock.
- Lobby/waiting area furnished.	- No furnished lobby/waiting area.
- Resident manager.	- No resident manager.
- Multi-appliance common laundry room on individual floors or in basement.	- Common laundry room in basement.
- Party/recreation room at ground (front, 2nd floor (rear) or on top floor.	- No amenity areas.
- Double-loaded corridor.	- Double-loaded corridor.

- inadequate and poorly maintained parking area lighting;
- poor visibility to public areas of site from within building and to public areas on site from street and lane;
- inadequate door and window hardware in the apartment; and
- poorly secured parking areas.

Owners and managers have cited the lack of attention to the problem of crime as a design issue and the ever-present objective to trim costs during the initial financing of the development as key reasons why such characteristics exist within buildings. In respect of the land use bylaw and building codes, local approving authorities have no mandate to insist on design changes meant to reduce opportunity for predatory crime.

2.6 SUMMARY AND CONCLUSIONS

As noted previously, a program of strategies for crime reduction should be designed to (i) increase residents' sense of felt responsibility for the area and what happens in it, and (ii) reduce the accessibility and attractiveness of an area and its building for the would-be offender.

This chapter illustrates the importance of the Connaught-West Victoria Community as a next-to-downtown high density housing area, and that it is experiencing a worsening residential crime problem. For both the area and City at large, there has been an increase in the absolute number of nearly all crimes during the past five years. However, while the crime rate has stabilized/decreased on a City-wide basis, the rate for the study area continues to climb. Among residential crimes, vandalism, theft from vehicles and break and enter are the leading offenses in the area. The goal of this project is to find ways to reduce the offender opportunity for these specific property crimes.

Reported vandalism is a widespread, low-intensity problem. While it appears vandalism is largely confined to vehicle damage, there may be considerable unreported vandalism to other private property, particularly in semi-public areas of buildings. Reported theft from vehicles also occurs throughout the area, with an increased offense frequency at numerous addresses. The distribution of reported offenses is uniform throughout the week, and most occur between 4 p.m. and 4 a.m. Vehicles in open or covered parking lots are most vulnerable to the offense in the opinion of area police officers. No portion of the study area is free from residential break and enter. More than five offenses during the past three years were reported at twenty-nine buildings. Multiple offense buildings tend to be those situated on or near major traffic/commercial streets. Reported offenses are highest during July and August, on Fridays and Saturdays, and during early morning and work day hours. The study of residential break and enter is of particular interest to the police, because its impact on the victim can be similar to that of crime against the person.

The area's potential as a successful neighbourhood is being undermined by several factors. There is uncontrolled traffic intrusion throughout the entire area, and constant intrusion of non-residents to local destinations of City-wide interest. There is frequent anti-social behaviour along public ways, and uses and activities which attract the criminal element. Better recreation facilities elsewhere attract residents to outside the area. There is competition among residents and non-residents for scarce parking. Finally, neighbouring residential areas are also among the high crime areas in the City.

Connaught-West Victoria has experienced marginal population growth in the past decade. However, there has been a considerable shift in the composition of the population living there. Today over half the residents are age 20 to 34, and males outnumber females in this age group. The proportion of residents over 65 is twice that for the City at large. There are few children. Nearly equal numbers of single and married people reside there. Less than one-third of the residents have lived in the area for more than five years. Three-quarters of the area's population works, most outside the community. The cost of housing, nearly all rental, is higher than the City's average. However, the median incomes for singles is similar to those living elsewhere and the median family income is one-third less than family income elsewhere in the City.

Resident population characteristics and life style have weakened the cohesiveness of community social structure and increased offender opportunity. The absence of a committed, stable population base; low home ownership; little pride in the community; heightened fear, partly due to the profile of male population; high apartment vacancy rate and vacancy of the community in the daytime, all contribute to the high incidence of property offenses.

Two-thirds of the area apartments are in high rise buildings, which are now the only type of building being developed in the area. The key determinants of building design are the applicable local bylaw(s), building codes, parcel size and market preference. Typically recurring design features thought to promote the opportunity for successful crime are believed to be the result of these factors, lack of attention to the problem of crime, and cost efficiencies.

From the analysis of area crime, the community setting, its residents and apartment buildings, certain conditions or actions which should be part of a strategies program to reduce property crime do not exist, or appear to be impractical at the present time:

- Area crime is an important and serious problem, but not severe enough to motivate residents to action.

- It would be extremely difficult to mobilize the public at large around a broadly based crime prevention program which depended upon their sustained participation.

- There are few opportunities to introduce structural changes in the community due to its location, role of its commercial areas in the City context and as a needed housing area for specific social groups.

The existing conditions and opportunities from which a program of crime prevention could be built are:

- Owners/managers are aware of specific design and management faults in crime prone buildings which make them the good targets they are, and their knowledge and remedial actions should be shared with other owner/managers.

- There is considerable redevelopment opportunity in the area, and the evident offender opportunity in existing buildings should be shared among those who will be responsible for implementation of new development.

- Links should be fostered among building residents to increase their sense of obligation to look out for each other and collective responsibility for the property they use as their own. The owner/manager is the pivotal agent in this respect.

- Each landowner in the community is an investor who depends on area residents for his financial well-being. Owners of apartment properties must take the lead in seeking assistance from the appropriate authorities to resolve conflicting land use and transportation problems which promote offender opportunity. Furthermore, they must be willing participants in the design and implementation of crime prevention programs.

3.0 THE CASE STUDY BUILDINGS

The foregoing chapter identified vandalism, theft from vehicles and break and enter as key property crimes demanding attention in the study area. In addition, based on statistical data and opinion, specific areas within Connaught-West Victoria were acknowledged to be prone to a higher incidence of one or more of these property crimes. Furthermore, this community, with its particular structural and social organization, has a weak base to start the process of building a program to reduce key property crimes in the area. Rather, individual crime prone buildings, their particular management and tenants provide more fertile ground for the design and implementation of strategies to mitigate key crimes.

3.1 METHODOLOGY

3.1.1 Case Study Approach

Several factors led to the choice of the case study approach as the most appropriate method of conducting the balance of the study. The approach allows for selection of subject buildings characterised by a number of design and management variables. It permits in-depth analysis of conditions, management and tenants at the selected buildings. It still allows for identification of general trends or patterns among area buildings. Furthermore, it provides for a manageable sample size. A group of nineteen (19) buildings comprise the case study group.

3.1.2 Selection of Buildings

The choice of buildings to be included in the case study group was predicated on several considerations. Both the walk-up and high rise apartment building type should be represented in the case study group. Offense prone and low incident/offense free buildings should be represented among the case study group. Furthermore, insofar as possible, the choice of buildings should include discrete examples for each of the key crimes.

By a comparison of offense prone and offense free buildings, it was expected that more marked contrasts would be exhibited in terms of the design and/or management characteristics which promote or retard the opportunity for vandalism, theft from a vehicle or a break and enter. The initial group of offense prone buildings (from which the case study group was to be finalized) was determined on the basis of statistical evidence and police opinion. The selection of the low incident/offense free buildings was based on a geographic location close by (within a block) selected offense prone buildings and/or similarity in terms of number of floors and number of units and, of course, an absence of reported crime.

The sample also considered that there should be additional variety among the selected buildings in terms of the following fundamental design and management variables:

- Degree of lobby access control.
- Degree of parking access control.
- Upkeep of building.
- Management profile.
- Tenure of residents.
- Resident age group.

In the case of break and entry, the analysis of locations by municipal address showed a generally uniform distribution of the offense among walk-up and high rise buildings. About 65 percent of the area's 7900 apartments are in high rise buildings and 35 percent of the area's apartments are in walk-up buildings. Similarly, sixty-three percent of 732 break and entry offenses (cumulative 1981-1983) are in high rise buildings, and 37 percent of the offenses are in walk-up buildings (APPENDIX B, FIGURE 10 DISTRIBUTION OF RESIDENCES AND OFFENSES IN WALK-UP AND HIGH RISE BUILDINGS).

As might be expected, no walk-up building exhibited the intensity of offenses reported in high rise buildings. However, given a lesser number of units the risk can be as great or higher than in some notable high rise buildings. Among the two offense prone walk-ups selected, both had the highest reported incidence of break and enter during 1981-1983, and one was cited by police as having a history of vandalism and break and enter. The reader should note that all the walk-ups in the area are older and not necessarily representative of current designs being constructed in Alberta's smaller urban centers. Many of the buildings are purposely being allowed to degenerate because they are situated on land designated for high density high rise development.

For theft from vehicles, nineteen buildings where five or more offenses were reported during 1983 were listed as possible case study buildings. For break and enter, twelve buildings reporting more than ten offenses (cumulative 1981-1983), and with a risk of break and enter more than twice the average for the area were considered good candidate buildings. No buildings were selected for possible study based solely on the incidence of vandalism. While it is a widespread problem in the area, the reported offenses do not evidence its concentration in any particular group of buildings. The concern about vandalism will be addressed in the survey and analysis of all case buildings.

3.2 THE CASE STUDY BUILDINGS

The complete list of selected buildings and their main characteristics is presented in TABLE 3.1 SURVEY SAMPLE. In the interest of protecting building owners and residents, the identity of buildings and their status as offense prone or offense free has been withheld. All buildings are next to or within a block of a major traffic street and/or commercial uses.

TABLE 3.1
CASE STUDY BUILDINGS

Building	Units	Floors 4 or<	Floors 5 or>	Parking Open	Parking Covered	Parking Enclosed	Upkeep of building - grounds Good	Upkeep of building - grounds Fair	Upkeep of building - grounds Poor	Controlled access-lobby Yes	Controlled access-lobby No	Resident Manager Yes	Resident Manager No	Tenure Rental	Tenure Condo	Age Senior	Age Other
A-1	96		*	Some	Some	Some		*		* (I/C)		*		*			*
A-2	101		*		All		*			* (I/C)		*		*			*
A-3	114		*		All			*		* (I/C)		*		*			*
A-4	122[20]		*	Some		Some	*			* (I/C)		*		*			*
A-5	69		*		All		*			* (I/C)		*		Built as condo			*
A-6	26	*		All					*	*			*	*			*
A-7		*		All			*			*			*				*
B-1	72		*	All			*			* (I/C)		*		*		*	
B-2	106		*	All			*			* (I/C)		*		*		*	
C-1	48		*	Some		Some		*		* (I/C)		*		*			*
C-2	52		*	Some		Some	*			* (I/C)		*		*			*

20) . grade units

TABLE 3.1
CASE STUDY BUILDINGS
(cont'd)

Building	Units	Floors		Parking			Upkeep of building - grounds			Controlled access-lobby		Resident Manager		Tenure		Age	
		4 or<	5 or>	Open	Covered	Enclosed	Good	Fair	Poor	Yes	No	Yes	No	Rental	Condo	Senior	Other
C-3	48		*	Some		Some		*		* (I/C)		*		*			*
D-1	345		*		All		*			* (I/C)		*		*			*
D-2	359		*	Some		Some			*	* (I/C)		*		*			*
E-1	18	*		All			*			*			*	*			*
E-2	18	*		All					*	*			*	*			*
E-3	63		*	Some		Some	*			* (I/C)		*		*			*
E-4	108		*	Some	Some	Some		*		* (I/C)		*			*		*
E-5	48		*		Some	Some	*			*		*			*		

Among the high rise buildings selected for study, three exhibit a high incidence of theft from vehicles, four exhibit a high incidence of break and enter, and three exhibit a high incidence of both offenses. The remaining five high rise buildings report little or no crime. Among the walk-up buildings, two are break and enter prone and two are free of reported offenses.

The sample buildings vary widely in the number of units, from a low of 18 suites to a high of 359 suites. Similarly, the buildings vary in height from 3 floors through 31 floors. However, there is not the discreteness among the survey buildings which was hoped for given the range of variables considered in the selection process. Some variance exists in parking conditions and the upkeep of grounds/buildings. All modern buildings have some degree of lobby access control and most have resident managers. The tenure is largely rental although one of the buildings was intended to be condominiums. Boom market conditions during the 1970's, similarities among target groups, similarity among the rules of two applicable bylaws and similar sites are all factors contributing to the similarity among buildings in the case study group.

4.0 THE SURVEY PLAN

The survey plan developed for the in-depth study of each of the nineteen (19) apartment buildings which comprise the case study group is described in this section. The specific goal of the plan is to obtain facts and opinions from a sufficiently broad range of sources to enable formulation of a balanced viewpoint of positive and negative design and management attributes found at the individual buildings. Towards this end, the plan entails acquisition of the information from eight interrelated sources using a variety of survey tools chosen for their suitability to each particular source. The role of each respondent source, the scope and limitation of the applicable survey tool(s), and the organization and content of the individual surveys are described in the balance of this section. The documentation of findings will enable ultimate preparation of crime-environment problem statements for individual buildings and descriptive statements embracing the entire sample group. A specimen copy of each survey document is contained in APPENDIX C.

4.1 METHODOLOGY

4.1.1 Baseline Information Requirements

For a crime to occur, a number of conditions must be met at an identical point in time. There must be:

" ° the physical presence of the offender, and
°° the appropriate psychological, social, economic and physical motivations and abilities of the offender;

° the physical presence of a person and/or object to be victimized, and
°° the necessary (indeterminate) degree of psychological, social, economic and physical vulnerability of that person or object to victimization;

° a specific physical location for both offender and victim (and/or object) to come together, and
°° the necessary (indeterminate) lack of physical controls inherent in that location; and

° the socio-economic environment within which the offender, victim or object, and physical location exist, and
°° the necessary (indeterminate) lack of social controls within that environment."[1]

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1. Consortium of Urban Design Consultants and The Research Group (1982) The Environmental Design and Management (EDM) Approach to Crime Prevention in Residential Environments, prepared for the Department of the Solicitor General, Canada and Canada Mortgage and Housing Corporation, Ottawa, p.77.

Historically, solutions to occurrences of crime have focused on altering or modifying psychological and socio-economic aspects of the criminal offender, as opposed to focusing on the alteration of circumstances relating to the criminal event as a crime prevention strategy.

Brantingham and Brantingham[1] claim that focusing only on the offender ignores the totality of the event: "...the criminal event is holistic and divisible only for analytic convenience."[2] The EDM (Environmental Design and Management) perspective continues from this position to say that "the holistic total situation must be changed sufficiently to deter the offender from committing the crime - and that this total situation can be modified more efficiently and easily by altering the other conditions or elements of the criminal events, (i.e. conditions other than the psychological and socio-economic characteristics of the offender)."[3]

The identification of discriminative environmental stimuli and cues which promote/retard criminal behaviour are thought to be dependent upon the potential offender's concept of the suitable environment for the commission of a particular crime; and, the potential offender's perception of the setting he finds himself in, in relation to that concept at the moment the event is about to occur.

If it is accepted that an environment must be perceived by the potential offender as being safe or unsafe to commit a crime, then among the critical cues are:

- the offender's perception of low-risk situations, i.e. low probabilities of being detected or apprehended, and

- the ready availability of suitable targets/victims.

Furthermore, the strength of these cues is dependent upon a number of dimensions of opportunity, including:

- ease of access to victims/targets (e.g. low demands in terms of time and/or skills required to commit the crime);

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1. Brantingham, P.J. and Brantingham, P.L. (1975a) "Crime and land use in an English Middle town: Toward a theoretical model of crime prevention through environmental design" paper presented to the American Society of Criminology, October 31, 1975.

2. Ibid, p.4.

3. Consortium of Urban Design Consultants and The Research Group (1982) The Environmental Design and Management (EDM) Approach to Crime Prevention in Residential Environments, prepared for the Department of the Solicitor General, Canada and Canada Mortgage and Housing Corporation, Ottawa, p.77.

- undefined victims/targets (e.g. passive or unprepared victims, or "soft" targets);

- ease of escape;

- absence of witnesses or presence of unwilling witnesses (e.g. witnesses who are unwilling to intervene); and

- anonymity or invisibility of the potential criminal (e.g. ability to move in on a target without being noticed even in the presence of potential witnesses).

As pointed out in Chapter 2.0, the identification of workable residential design and management strategies to assist in the alleviation of the area's key property crime problems is the goal of this project. The conclusion of Chapter 2.0 was that the focus for identifying possibilities to introduce effective strategies to reduce offender opportunity should be on individual crime environments. As a prelude to formulating and initiating changes in those environments, and to be able to measure the costs/benefits of change in future, it is necessary to describe the existing environments in terms of the answers to several key questions:

- What do the details of reported (and unreported but possibly observed) offenses indicate about the specific vulnerabilities of the scene of the crime? (e.g. incidence of no evidence of forced entry to suite may be an indication of tenant carelessness.)

- What aspects of the specific crime environment may be providing the stimuli triggering (or abating in the case of the selected low incident/offense free buildings) the offender's decision to commit a crime (is the environment "safe or unsafe")? Specific issues include:

  -- access and escape - i.e. the ability of illegitimate users or criminals to penetrate the environment (building or grounds) and to escape after the commission of a crime if they do manage to gain entrance;

  -- the surveillance capability of the environment - i.e. observation of suspicious or illegal behaviour by both casual observers (residents, service people, etc.) and formal law enforcement personnel (police, private security personnel);

  -- the social organization of residents - i.e. residents' sense of community and willingness to intervene in the event of suspicious or illegal behaviour;

  -- proprietary feeling among residents - i.e. a concern for what goes on in their neighbourhood, a feeling of territoriality;

-- the technical difficulty and risk attendant upon the commission of a criminal act - e.g. doors and locks, electronic surveillance devices (cameras, video, intercoms);

-- the practical limitations (i.e. functional, legal, financial) on changing the environment.

The survey instruments were designed to elicit answers to these questions (see APPENDIX C).

4.1.2 Data Collection

a) Techniques

A combination of three data collection methods: archival, survey and observational, will be used to obtain the required information from the sources identified in the subsequent section. All three methods already have been used in some form to derive the information presented in previous chapters. Each has its own advantges, disadvantages and analytic procedures. All are well established in social science research but their use in crime environment problem analysis raises some special considerations.

(i) Archival data collection

Archival material includes police reports, city planning data, building plans, business information and the like. Archival survey already has been used extensively to date in the project to identify the extent, nature and pattern of area crime and the socio-economic characteristics and pattern of area crime and the socio-economic characteristics of the study area.

A problem often encountered with archival sources is gaining access to them. Accessibility to statistical data on crime occurrences is not often a problem. However, detailed crime reports are frequently likely to be confidential and examination of these records by outsiders may, therefore, be prohibited by agency policy. Applicability of the available information to the target site is another problem. Police statistics are usually kept on the basis of precincts or zones. If the recording unit does not correspond to the problem site, it can be a time-consuming process to extract the needed information. To provide a reliable impression of the target site, the review of archival records should usually span several years - three years in the case of police records. This will ensure that the observed trends are relatively stable and do not reflect one-time events. In the case of this project, access to police and planning data has not been a problem. However, considerable manual manipulation of computer-stored police data has required a great deal of time to tabulate in a useful form.

(ii) Survey data collection

Survey methods include questionnaires and interviews. The former typically involve written responses to a set of printed questions, while the latter usually involve some form of interaction between the interviewer and the respondent. Interviews permit questions to be clarified, and they afford more flexibility in the way the questions are presented. The information that can be obtained through either method is almost unlimited, and can include:

- information about the respondent, such as age, sex, income and membership in organizations;
- information about past, present, and even future behaviour, such as whether the respondent is planning to move;
- information about the respondent's perceptions, especially whether the person believes an area to be safe;
- information about the respondent's attitudes, such as how he or she feels about the existing and future possibilities of a particular site; and
- information about the respondent's underlying beliefs, behaviours and attitudes, such as what the person perceives to be a citizen's responsibility for improving the apartment building or local environment.

Questionnaires yield large amounts of information relatively quickly and do not require trained interviewers. However, explicit instructions are required and returns tend to be low. Interviews provide a high response rate and accurate information but are costly in terms of time and provide extraneous information. Key-person interviews were conducted in the early stage of this project to obtain an overview of the study area and its problems, and the state-of-the-art of crime prevention.

(iii) Observational data collection

These are systematic techniques for observing and recording the behaviour patterns and the organization of physical features at the target site. Observation avoids the biases that can be introduced by survey techniques, which require the respondent to report on his or her behaviour. Observational data also can be used to validate self-report responses (questionnaires) and to validate data from archival sources. In general, observational techniques require considerable knowledge and care in order not to compromise the quality and consistency of the data. Systematic observation requires a method for coding and recording the aspects that are being observed. The technique was used informally in the earlier stages of this project to acquaint the analyst with the general conditions of the area, obtain a policing perspective of the area, and validate planning information.

Observation will be the primary source of information for detailed documentation of the physical characteristics of the case study buildings.

b) Sources

It would be convenient and economical if answers to the questions raised previously were available from a single source. However, as evidenced in the description of data collection techniques, several sources must be tapped to extract the required information. Some are not always easily accessible (i.e. an offender), and none are thoroughly reliable. In the context of property crimes and their prevention, the inability to rely on one source for all data is likely a distinct advantage. Crime is a complex issue, not always well understood, and its prevention is an imprecise science. These characteristics of the subject emphasize the importance of triangulating on the problem.[1] It is desirable to consider the role, viewpoint, skills and experience of the major players to get the most balanced view of what is going on in the crime environment.

The data collection process entails gaining access to eight specific sources using the above described techniques to acquire the necessary information. The process is described in the following FIGURE 4.1.

FIGURE 4.1
DATA COLLECTION TECHNIQUE

Source of Information	Archival	Survey Questionnaire	Survey Interview	Observation
Offense Records	*			
Convicted Offender			*	
Apartment Building	*			*
Resident Manager		*	*	
Resident		*		
Builder/Designer			*	
City Planner			*	
Police Personnel			*	

1. Dr. Irvin Waller; Ottawa, Ontario; November, 1983.

4.2 IMPLEMENTATION

The special characteristics of the information sources, details of the data collection instruments designed to tap these sources, and the scope and sequence of application are described in the balance of this section. A specimen copy of each instrument is contained in APPENDIX C.

4.2.1 The Criminal Offense Report

Every reported crime is the subject of an offense report. The report, in a standardized format, records the most basic information about the criminal event (e.g. the offense, the victim, the location, the time, means of access, means of egress, etc.). The offense report is the most reliable source of information about the details of specific criminal events in the sample buildings.

An archival analysis recorded the what, how, when, where and who of reported offenses at each case study building. This enabled correlation of the pattern of offenses there with the area-wide patterns described in Chapter 2, 2.2 STUDY AREA CRIME. It also enabled isolation of particular vulnerabilities at each building based on the evidence given in the reports. The data was obtained from review of offense reports made during 1981-1983 for approximately 94 thefts from vehicles over and under $200 and 166 break and enter offenses at the selected buildings. The recorded data included exact location; time; method, means and object of attack; value of stolen property; point of entry; details of the offense; preventative advice given and other details relevant to the goals of the project. The information from individual offense reports was not available for review or publication.

4.2.2 The Convicted Offender

A cooperative offender experienced in the particular crime environment can enhance the analyst's perspective on the conditions affecting the choice and process of committing the criminal act, the vulnerability of the residential environment to the offender's particular skills and the effectiveness of traditional crime prevention techniques.

An interview survey recorded an offender's perspective on the contemplation and act of residential break and enter, and the person's opinions about the vulnerability of the targets he chose to attack. The convicted offender selected by the Calgary Police Service was a "professional"; that is, responsible for a large number of residential break and enter offenses at apartments, preferably in the study area.

The interview questions addressed the following matters: criminal history, preferences for neighbourhood characteristics, preferences for building characteristics, approach to building, approach to target, entry, exit, goods stolen, repetition,

sequence of activity, equipment used, planning and other details of the event. A summary record of the interview was prepared from the person's responses to the questions.

4.2.3 The Apartment Building, The Resident Manager and The Residents

Apart from the offender, the apartment building, the resident manager and the resident have major roles in determining the physical and social setting for the criminal event. They are also the only sources of information with respect to unreported crime. All three are also likely the most important agents of change to reduce offender opportunity.

An archival analysis and observational survey was to systematically document the potential offender opportunity created by the as found conditions at each of the nineteen case study buildings. The archival survey of approved development permit plans and/or construction documents (where they were available) was to familiarize the analyst with the organization of the premises. The observational survey was to record details of the physical features at the site and building using a survey checklist addressing these main subject areas: surrounding land use, target hardening devices, hardware for detection of crime, surveillance potential, means of access and escape and maintenance/upkeep for all exterior and interior areas of the development. A daytime and evening visit to the site was to be made by a police security analyst, a planner and the resident manager at the building.

The individual data collection instruments for resident managers and residents were designed in tandem, to obtain the following information:

- the demographic characteristics of each site;
- perspectives as to the critical physical and social features which undermine the safety of the environment and those which promote a safe environment; and
- risk management strategies that have been tried.

The resident manager at each building was to be asked to respond to a questionnaire survey and to participate in an interview survey. The 56 point questionnaire was to be answered by each resident manager prior to his participation in the survey of the building with the project team. The follow-up interview survey with the person was to focus on particular issues and concerns drawn from responses to the questionnaire and the project team's visit to the building.

A resident group at each of the nineteen sample buildings was to be asked to respond to a 69 point survey questionnaire. A ten percent (180 questionnaires) proportional sample response from the 1800 units would have ensured a reasonable balance of opinion from the residents of each building, and allowed for drawing of trend

indications from the total sample size. It was estimated twenty percent distribution of questionnaire would yield the desired response rate. In previous studies undertaken/sanctioned by the Calgary Police Service, response to similar survey questionnaires has been as high as 68 percent.

The horizontal and vertical distribution of questionnaires in the case study buildings ensured representation of dwelling units from at least the first, second and top floors in all instances, with front, rear and side yard exposures, locations next to fire stairs, elevators and at mid-point between these access/egress points.

4.2.4 The Builder/Designer, The City Planner

While they are not the only ones, the builder/designer and city planner are two of the key players determining the characteristics of the physical setting for the criminal event. Both parties have the task of resolving the array of conflicts which are a natural part of the development process. The designer must embody the market, financial, legal, client and code requirements in a design which is appropriate to the site and acceptable to the approving authority. The planner must ensure that the spirit (and the letter of the law in many instances) of applicable land use policies and bylaw requirements are met, without adversely limiting the designer's freedom. Each party is part of the problem, because crime and its prevention is not always well understood or among the priorities/mandate of the two. However, their training, position in the development process and influence/decision making authority make them a natural part of the process of problem analysis and creation/implementation of crime prevention strategies.

Where possible, a separate interview survey was to be conducted with the builder/designer of each case study building, and the appropriate policy and current planning representative(s) from the Planning Department. The specific questions for these respondents were formulated by the project team following review of the data collected from the building survey, resident manager and residents.

For the builder/designer and Planning Department representatives, specific questions elicited each respondent's:

- understanding of residential property crime;
- understanding of crime prevention concepts;
- mandate from clients/administration to consider crime issues in the decision process;
- opinion of a policing role in the design/approval process;
- suggested alternative design solutions to specific problems; and
- opinion of the impact of codes, bylaws and policies on design choices.

4.2.5 The Police

Traditionally, the police in Calgary have not been closely involved with the kind of analysis or process typified by this particular project. Rather, a more basic approach has characterised the application of crime prevention techniques - addressing "today's problems today!". This is an essential part of the policing responsibility to the citizens of the community. However, it is reactive rather than proactive in nature. More recently, there has been interest and accelerated development of proactive programs (Neighbourhood Watch is currently enjoying considerable success) of which this project is a part. The training and hands-on experience of the police officer in the study area is an essential component in the practical analysis of workable preventative approaches which produce results.

An interview survey was conducted with the zone sergeants responsible for police zones 1-4 and 1-5 in the study area. The specific questions for these respondents, which were formulated following review of data collected from the building survey, resident manager and residents, identify:

- the specific policing strategies currently being implemented to control crime in the area and its problem buildings;
- the nature of the structure in place to develop future strategy plans for dealing with newly identified crime problems;
- the implications of the aforementioned interview findings for alternative policing strategies to control crime in the problem areas and buildings;
- opinion respecting a policing role in the planning decision making process.

5.0 DATA COLLECTION AND ANALYSIS

The previous chapter described the methodological basis for the survey plan and the specific tools used to acquire information from several sources about the sample group of buildings. This chapter first reports on the process and extent of implementation of the original survey plan. The chapter then describes key characteristics of break and enter and theft from vehicles at the sample group of buildings which were crime prone, based on analysis of offense reports. This description is followed by a summary of the opinions of the convicted offender describing preferred conditions for committing a break and enter, and characteristics of committing the act itself.[1] Subsequently, the chapter describes characteristics in evidence at some or all of the sample group of low crime and high crime buildings.[2] This information supplements the data presented in TABLE 3.1 CASE STUDY BUILDINGS.

Finally, an extensive list of positive design and management conditions are presented in a series of charts. They document the extent to which the conditions were present at the low crime and crime prone buildings in the sample group. From comparing responses at the low crime and crime prone environments, the report identifies and priorizes the conditions most likely contributing to the elimination or reduction of opportunity for successful commission of the key crimes. The text elaborates on their use in the sample group. Some of the listed positive conditions were not found to be in evidence at any of the buildings, and no claim is made respecting their effectiveness in the local environment. The commentary notes their effectiveness and acceptability in other settings and possible applicability to the local situation.

5.1 IMPLEMENTATION OF THE SURVEY PLAN

5.1.1 Survey Procedures

The entire survey plan described in Chapter 4, except the convicted offender interview[3], was implemented during September, 1984 to January, 1985.

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1. The offender was very active in the study area during the period for which statistics were collected.

2. In the context of this report, low crime and crime prone buildings means buildings with a low incidence and buildings with high incidence of the crimes which are addressed in the study - B&E and theft from vehicles.

3. It was opportune to conduct the interview with the offender in July, 1984 when he was temporarily relocated to Calgary. The project team also thought it beneficial to have the offender's insight prior to on-site survey of the sample group of buildings.

The archival analysis of property offense records and development permit documents were completed first. This analysis familiarized the team with the characteristics of the offenses and scene of the events. Then, resident manager and resident survey questionnaires were distributed at each building. This action was preceded by a meeting with the owner/management company for each building to obtain permission to initiate the surveys and a meeting with the resident manager for each building to secure his cooperation in carrying out the surveys. Apart from responding to his questionnaire, the resident manager distributed surveys (according to the team's request, exercising discretion where appropriate) and acted as a mail drop for residents' responses.

Following return of the questionnaire surveys, the project team undertook the building survey during two visits at each site. The resident manager accompanied the team to comment on aspects of design and management and answer queries. The extent of site lighting was recorded during a separate evening survey of the sites. Interviews with area police personnel and municipal planning officials responsible for policy and current planning in the area comprised the final step of the survey plan.

5.1.2 Extent of Implementation

TABLE 3.1 CASE STUDY BUILDINGS listed 19 apartment buildings for inclusion in the survey sample: 15 high rise buildings and 4 walk-up apartment buildings. It was not possible to initiate all of the survey instruments at all of the buildings as was proposed at the outset.

Details of reported offenses were obtained for all of the 19 buildings. Archival analysis was completed for 13 buildings, with no documentation on file for the balance (4 walk-ups and 2 high rise structures).[1] At the owners' insistence, tenant, resident manager and building surveys were not initiated at the 4 walk-ups and 2 of the high rise buildings. At another building the owner did not authorize surveying the residents at the building.

At the participating buildings each resident manager responded to his/her questionnaire. Tenant participation ranged from a single response at one particular building to nearly 100 percent at several buildings. As a result of the participation level, it is possible to report in full on 12 buildings. For the thirteenth building there will be no resident response. For those 6 buildings where surveys were not permitted, we have recorded owners' reasons for abstaining, and our own observations of the buildings gained while attempting to make contact with the resident manager and owner.

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1. TABLE 3.1 BUILDINGS A-6, A-7, E-1, E-2, C-1.

Police and planning officials were available for interviews at the end of the survey process. The proposed interviews with architects were postponed. Among the architectural firms for the 19 buildings, most of the architects actually responsible for design and the contract documents are no longer in Calgary; one architect refused to be interviewed.

5.2 ENVIRONMENT CHARACTERISTICS, CRIME DOCUMENTATION AND INTERPRETATION OF DATA

5.2.1 Details of the Key Crimes

The information following in this section enlarges upon the area-wide patterns described in 2.3.3 d) Highlights of Area Crime, with added details about the commission of the key crimes at the sample group of buildings. The information was derived from two sources: analysis of the offense reports for the crimes in question at the sample buildings, and the opinion expressed by the convicted offender. The study of offense reports confirms, in some instances, what was already anticipated from the initial analysis. It also provides added knowledge which could not be ascertained from the statistical information maintained in the police service computer data base.

Details about break and enter are described first, followed by theft from vehicles. The insights provided by the convicted offender complete the section.

a) Break and Enter

From the analysis of break and enter offense reports it is known that at the sample group of buildings:

(i) Residents are usually asleep or away from home at the time of the attack.

There is a general pattern of a higher incidence of B&E between the early morning hours and the late afternoon (0400-1600) and a lower incidence during the evening hours. This pattern coincides with the overall trend for the study area. The distribution of offenses is relatively even during the entire week and no particular significance can be attached to the weekday or weekend occurrence. Fully 25 percent of the break-ins occurred between 0400 and 0800. During these hours, residents are either sleeping or have vacated the suite for the workday. More than 60 percent of the suites were unoccupied at the time of attack.

(ii) The front door entry to the suite is the chief point of access for the criminal.

Between 65 and 80 percent of entries were through the front door. From 5 to 10 percent were from the balcony and about 4 percent were through a window to the suite.

(iii) Access to the suite is easy; by a direct "walk-in", use of a pass key or prying a lock or door frame.

Over one third of entries through doors were direct walk-ins through unlocked or open doors, or by using a suite or general pass key.

At least 20 percent of the suites (and likely more) are known to have been unlocked at the time of the attack. Contrary to the statistic, residents responded overwhelmingly that they always locked the door whenever they left their suite. It is possible for both to be largely correct. The criminal seizes on any opportunity in a chosen setting to commit a B&E; the unsuspecting resident may have inadvertently left the door unlocked just that once.

Another 1/3 of entries were gained through doors or windows by prying open the door or window or frame, using a screw driver, jimmying, etc. Cheating the lock, direct removal or kicking in and other miscellaneous methods of attack accounted for the balance.

(iv) Cash and jewellery are most frequently stolen.

Cash and jewellery were taken in 60 percent of the cases. Large items, such as photo and sound equipment and clothing, were taken in 25 percent of the cases. In the balance of break-ins, nothing was taken. The likelihood of retrieving stolen goods is poor; cash and jewellery can be disposed of easily.

(v) Damage to the suite is usually marginal, but the victim's personal loss can be considerable.

Damage to the suite caused by the offender is less than $50 in 60 percent or more of the break-ins. The damage usually results from the means of attack (e.g. broken locks, etc.). Where goods were taken as part of the break-in, nearly 50 percent were valued at $500 or greater, and nearly 25 percent were valued between $100 and $500. Losses to the individual are considerable.

(vi) Preventative advice offered to residents is common sense and practical, but does not acknowledge the victims' lack of control of his surroundings.

The advice is principally target hardening - lock doors, change locks, install deadbolts and store valuables safely. While the advice is practical and effective if followed, it is the victim's last line of defense against the offender.

b) Theft from Vehicles

From analysis of theft from vehicle reports, it is known that at the sample group of buildings:

(i) Offenses occur every day during the week, but thefts from vehicles usually occur during the late afternoon and evening hours when residents are at home.

The distribution of offenses is highest in the months of May, June and December for the period Friday through Monday. Fully two-thirds of thefts from vehicles occur between 1600 and 2400, a trend which coincides with the pattern from the overall study area. During these hours, residents and their cars are usually at home following the work day. Apartment building parking facilities are largely vacant during the day.

(ii) Sound and photo equipment are most frequently stolen.

Among the goods removed from vehicles, sound and photo equipment were taken in 40 percent of the cases. Cash, jewellery, clothing, license plates and other miscellaneous items were taken in the balance of thefts.

(iii) The value of goods stolen represents a considerable loss to the owner.

More than half the goods stolen were valued between $100 and $500, and another 22 percent were valued in excess of $500.

(iv) Virtually no preventative advice was given to the victims of theft from vehicles.

Apart from ensuring vehicle doors are locked and goods are stored in a safe place (out of sight), the vehicle owner (usually a resident) has no direct control over conditions relating to the security of his vehicle. Police officers recognize the absence of environmental control and know there is little the owner is able to do save the obvious measures. As is the case with break and enter to an apartment, target hardening at the vehicle is the last line of defense for the owner.

5.2.2 The Convicted Offender

The convicted offender provided a number of insights to preferred conditions for committing a break and enter, and characteristics of commission of the act itself.

a) Setting

Apartment neighbourhoods containing older buildings, younger people and with conditions which suggest there is a don't care attitude about the place are attractive to the professional offender. Untended mail, flyers about and presence of refuse and burnt out lights were cited as indications of a don't care attitude.

Location of the building on a typical city block is unimportant to the offender. The specific conditions and opportunities presented on the site take precedence.

Similarily, if conditions (the opportunity) are good, he will attack more than one building per block. It is a matter of practice to attack more than one apartment at the same building and, if it appears profitable, the same apartment will be attacked more than once.

b) Dress and Equipment

The offender will dress so as not to stand out in any conspicuous way. The offender made particular reference to avoiding looking like a construction worker.[1]

The person may carry small tools to assist in gaining access, but nearly always remains unarmed. While this opinion may be of some consolation to the potential victim, he should not assume this to be the case and risk personal injury or death if confronted by a break and enter or theft from vehicle in progress.

c) Access

The building will be approached by vehicle or on foot to the parking garage (behind tenant's vehicle) or through the main entry behind a tenant, or by using call board tactics to gain entry.

The apartment will be approached with a "pass key" or "entered from a balcony".

d) Inside the Suite

Once in the suite, the offender will spend 15 to 20 minutes at the location. Beginning at the point furthest from the door (usually bathroom/bedroom) he will work his way back to the point of entry. He will always plan an escape route - usually out a window/balcony if faced with the occupant or interrupted. Unconcerned about fingerprints or violating the privacy of the victim, he will take small items that can be carried down fire stairs to an exit door. Goods will be sold on the street.

e) Philosophy

The offender claimed break and enter was a business to him, "I'd start first thing in the morning". "The best housebreaker is careful, professional, persistent, quiet, blends in and keeps his mouth shut."

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1. Discrimination against any particular employee group is not intended by this reference to construction workers. However, the reader's attention is drawn to the previous reference to fear of crime among some residents, possibly caused by the disproportionately high male population, many of whom are construction workers, and who are often accused of behaviour which would cause them to be noticed or stand out in the community.

5.2.3 Characteristics of the Sample Buildings

The information presented in this section completes the description of the characteristics of high rise apartment buildings. The description is based on data given by residents and managers[1] responding to the surveys initiated at the sample group of buildings.

a) Apartment buildings designed for rental and rented condominiums designed for sale are subject to acts of B&E and/or theft from vehicle.

Each group contained one or more buildings designed and operated as rental properties, and one or more designed as a condominium but operated as a rental property. Only the low crime group included a building designed and operating as a condominium.

b) There was a predominance of longer term residents at the low crime buildings as compared with the crime prone buildings.

The low crime and crime prone groups each contained buildings characterised by short and long term tenancy. However, among the 5 buildings in the low incident group, tenants at 3 were well established, long term building residents. Tenants at two crime prone buildings were established longer term residents. At the remaining 6 buildings, residency was short term (up to 2 years).[2]

c) The age distribution of residents was similar for both the low crime group and the crime prone groups.

The low incidence group contained one building exclusively for elderly people and the crime prone group contained 2 buildings populated by elderly people (one of which was designed as a senior citizens residence). The balance of sample buildings were populated by young to middle age residents.

d) There was a predominance of middle to upper income residents at the low crime buildings as compared to the crime prone buildings.

Examples of all income levels were present in each building group. However, among the 5 buildings in the low crime group, 3 contained middle to upper income residents, 1 contained fixed low income residents and the other contained low to middle income residents.

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1. The reader is cautioned that the information is based on a maximum 20 percent resident response (at most buildings the response was less than 20 percent) and a response from all managers.

2. Among the 2 buildings with a short term tenancy pattern, one provides short term accommodation (a "few months") for newly arrived corporate executives in Calgary.

At the 8 crime prone buildings, 1 contained middle to upper income residents, 1 contained fixed low income residents and 6 contained low to middle to upper income residents.

e) There was a predominance of longer term resident managers at low crime buildings as compared to the crime prone buildings.

Managers at the low crime buildings typically had more experience with tenure ranging from 1 to 9 years. At the buildings in the other groups, manager tenure ranged from less than a year to three years.

f) At both the low crime and crime prone buildings, the majority of residents claimed no knowledge about the presence of crime at their building.

Among those who claimed knowledge, there was no clear correlation between the claim and fact. Most claims were less than the number of reported offenses. In two instances, more than the reported number of offenses were noted.

g) There is greater consistency between manager perceptions of crime and reported crime at the low incident group as compared to the prone group.

At the crime prone group, two managers' knowledge approximated the facts; the others could not be correlated with the reported crime.

h) A majority of responding residents at all sample buildings considered parking facilities and the neighbourhood environment to be particularly insecure and unsafe areas.

Covered/enclosed and underground parking structures were most frequently cited (compared with surface lots) as insecure and unsafe by residents. In the neighbourhood environment the most frequently cited concerns were street prostitution, inappropriate social behaviour (drunkeness, excessive noise and verbal abuse) and dark lanes, which residents feared using at night. Nearly all residents considered the suite to be the most secure place in their buildings and a majority of residents feel secure in the internal public areas (hallway, lobby, laundry area, etc.) and on the grounds (usually a front yard) outside the building.

i) Managers at low crime environments shared residents' concern about safety and security in parking facilities and the neighbourhood environment.

Parking facilities and the neighbourhood environment caused insecure and unsafe feelings among all managers in the low incident group, but only by three in the prone group. The other five managers reported feeling secure everywhere in the local environment and neighbourhood.

5.3 DESIGN AND MANAGEMENT CONDITIONS

The foregoing described key characteristics of B&E and theft from vehicles based on an analysis of crime reports and opinions of a convicted offender. It also elaborated on the characteristics of residents, managers, conditions and principal concerns at the sample group of buildings.

The following section documents design and management conditions found from the surveys of buildings, under five headings:

- ease of access and escape,
- surveillance capability of the environment,
- technical difficulty/risk of completing the act,
- proprietary feeling among residents/manager, and
- social organization of residents/manager.

The method of documentation enables the identification and ordering of design and management practices for consideration as possible strategies for reducing the opportunity for successful commission of the key property crimes.

a) Documentation

For each of the above noted subject areas, the design and management conditions found at the sample group of buildings are summarized on a matrix chart (TABLES 5.1, 5.2, 5.3, 5.4 and 5.5). The horizontal axis of each chart is always the same, listing each sample building in one of four groups:

- low incident/crime free,
- B&E prone,
- B&E/theft from vehicle prone, and
- theft from vehicle prone.

These are the same groups identified for TABLE 3.1.

The vertical axis to the left margin of each chart lists design and management conditions which the surveys were designed to identify, but may or may not be in evidence at any one of the sample buildings. However, each listed condition is believed to be a contributor in some way to the general reduction of the cues and opportunities which facilitate successful commission of a crime.[1]

The extent to which each condition or practice was met at each building is indicated by one of four symbols which appears in the grid taking up the balance of the chart:

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1. Wallis, Allan; Ford, Daniel (1980) Crime Prevention Through Environmental Design; An Operational Handbook, Washington, D.C.: U.S. National Institute of Justice, pages 81-108.

means the condition/practice did not occur or was insignificant.

means the condition/practice did occur to some extent (< 50 percent).

means the condition/practice occurred to a considerable extent (> 50 percent).

means the condition/practice was very significant or occurred all the time.

b) Interpretation of the Charts/Organization of Findings

The identification, effective design and management conditions were based on three interpretative principles.

- Where there is an obvious variance from presence of a condition at the low incident/crime free buildings to its absence at the crime prone buildings, the condition is likely an effective contributor to decreasing offender opportunity (and therefore crime) at the low incident/crime free sample buildings.

Since these features are largely unique to the low crime environments, they are listed first as ones which could be considered for possible use at similar high density buildings where neighbourhood and crime conditions approximate those described earlier.

- Where there is the universal presence of a condition across all sample groups, the condition is probably an insufficient deterrent to the commission of a crime unless used in conjunction with other positive features. (Alternatively, acquisition of additional detail pertaining to the condition might indicate its more successful or complete application at the low crime environments and, therefore, vary its rating across the sample groups.)

These features are likely providing a measure of support in reducing opportunity at the low crime buildings, and they are listed second as ones which could be considered for incorporation at similar existing or proposed environments.

- Where there is complete or near complete absence of a condition across all sample sub-groups, its contribution to decreasing offender opportunity at the sample buildings is unknown.

While these features have been largely untried at the sample group, they are not necessarily ineffective. Discussed last, the related commentary elaborates on their use and effectiveness in other residential environments and their possible value at residential settings similar to those found in the study area.

For each of the subject areas addressed by the surveys, an introductory commentary and the table documenting the findings is presented at the first of each section. The priorized design and management conditions drawn from the tables (and cross-referenced with the tables) are then discussed with references to the sample buildings.

5.3.1 Ease of Access and Escape

The relative ease of access/egress at a building has a bearing on the attractiveness of the environment to the potential offender. An environment which increases the complexity and difficulty of gaining access to or escaping from the target requires the offender to spend more time at the scene of the offense, and increases the threat of being discovered and apprehended.

FIGURE 5.1 represents findings with respect to ease of access and escape at the sample buildings. Nine design/features and 10 management control features are listed in the chart. The list is not exhaustive; it focuses on the typical key points of access to buildings and the most common management practices relating to access control.

The chart indicates that each of the low incident/crime free sample buildings (Group A) exhibited more of the listed design features than five of the eight crime prone buildings (Group B, C and D). Among the crime prone buildings, the theft from vehicle group had the fewest positive features, followed by the B&E and theft from vehicle group and then the B&E only group.

For the listed management features, the chart shows a similar pattern. Each of the sample buildings in Group A exhibited more of the positive management features than six of the eight crime prone buildings.

a) Design Conditions/Control of Access and Escape

The following positive features were unique principally to low crime environments.

- Public access at structured parking facilities was restricted to specified access/egress points. (DESIGN 7)

Unrestricted public access was possible to half or more of the structured parking areas at all but one sample building prone to theft from vehicles. Only one low crime building had this feature;[1] access at the other four low crime buildings was restricted to specified access/egress points.

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1. At this corner-site condominium building, the exposed parking is visible from two streets and there has been extensive upgrading of lighting to lane parking area. The uncontrolled vehicle access point to this parking is from the street, not the lane.

FIGURE 5.1.1 : DESIGN & MANAGEMENT CONDITIONS

ACCESS AND ESCAPE

○ = No/None
◒ = To some extent/<50%
◓ = To considerable extent/>50%
● = Yes/All

DESIGN	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B & E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	13	19	4	8	14	3	16	18	1	2
1. Access/egress points at building require movement through lobby or other control point.	●	●	◒	◒	●	○	◒	○	◒	◒	◒	◒	◒
2. No accessible suites at grade.	◒	●	●	◒	●	○	●	●	●	○	◒	○	●
3. No accessible suites at a landscaped deck level.	◒	●	●	●	●	●	●	◒	○	●	◒	○	○
4. There are no balconies or individual balconies, are inaccessible from others.	●	●	◒	●	●	◒	◒	○	◒	●	●	◒	◒
5. Access to parking is streetside, not laneside.	●	●	○	●	●	○	◒	◒	●	○	●	●	●

FIGURE 5.1.2 : DESIGN & MANAGEMENT CONDITIONS

○ = No/None
◒ = To some extent/<50%
◓ = To considerable extent/>50%
● = Yes/All

ACCESS AND ESCAPE

DESIGN	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B&E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	15	19	4	8	14	3	16	18	1	2
6. Parking garage door controls access.	●		●	●	○[1] ●[2]	●		●	○ ●	○	○ ●	○	○ ○
7. Parking floors are not open to lane or adjacent lots.	●		●	●	◒	●		●	○ ●	●	○ ●	○ ●	○ ●
8. Direct access is not possible from parking garage floors to typical floor by elevator.	●		○	○	○	○		○	○	○	○	○	○
9. Garbage collection room is external to building and parking.	●	◒	◒	◒	◒	○	◒	○	◒	○	◒	○	○

1. The upper parking level
2. The lower parking level

FIGURE 5.1.3 : DESIGN & MANAGEMENT CONDITIONS

○ = No/None
◒ = To some extent/<50%
◓ = To considerable extent/>50%
● = Yes/All

ACCESS AND ESCAPE

MANAGEMENT	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B&E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	13	19	4	8	14	3	16	18	1	2
1. Security personnel at building for part or all of day control access/egress, and observe movement within bldg.	○	○	○	●	○	○	○	●	○	○	○	○	○
2. Manager inspects conditions at access/egress points to building on daily basis.	●	●	●	●	●	●	●	○	●	●	●	●	●
3. Building is locked from within during nighttime hours.	○	●	○	○	○	○	●	○	○	○	○	○	○
4. Service representatives are accompanied to destination within building.	●	●	●	◒	●	●	●	●	◒	○	○	○	●
5. No service people have continuous access to the building or certain areas of the building.	◒	◒	◒	◒	◒	◒	◒	◒	○	○	○	◒	○

FIGURE 5.1.4 : DESIGN & MANAGEMENT CONDITIONS

ACCESS AND ESCAPE

○ = No/None
◐ = To Some extent/<50%
◕ = To considerable extent/>50%
● = Yes/All

MANAGEMENT	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B&E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	13	19	4	8	14	3	16	18	1	2
6. Residents don't prop open access/egress doors to building.	◐	●	●	●	◐	◐	◐	○	◐	◐	◐	◐	◐
7. Residents don't admit strangers to the building.	◐	●		◐	●	◐	○	◐	●	◐	◐	◐	●
8. Suite locks are changed when new tenant occupies suite.	●	●	○	●	●	○	○	●	○	○	○	●	●
9. Management normally permits tenants to install additional locks to suite entry points (based on residents' response).	●	●		●	●	●	○	○	◐	◐	●	○	●
10. Tenants have installed additional locks on suites.	◐	◐		◐	●	◐	○	○	◐	○	◐	○	◐

FIGURE 5.1.5: DESIGN & MANAGEMENT CONDITIONS

ACCESS AND ESCAPE

○ = No/None
◒ = To Some extent/<50%
◓ = To considerable extent/>50%
● = Yes/All

MANAGEMENT	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B&E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	13	19	4	8	14	3	16	18	1	2
11. Residents lock their suite every time they leave their suite.	●	●	●	◒	●	●	●	◒	●	◒	●	●	●
12. Garage door opening/closing devices are on a short open/ close cycle.	◒		●	◒	◒	●		●	●		●		

At the typical crime prone building, half of the structured parking is below ground, the other half is in a roofed over structure with sides open for ventilation. In new and existing structures, these open areas should be secured by fencing and/or screening.

- Control access to structured parking area at the specified access/egress points. (DESIGN 6)

Four of the five low crime buildings had this feature. Unrestricted vehicle and pedestrian access at the entry point(s) to half or more of the structured parking area was possible at all sample buildings prone to theft from vehicles.

At two of the crime prone buildings the underground parking access point was also uncontrolled and numerous residents cited the undesirability of this feature in the survey response.[1] The provision of an electrically operated, driver controlled garage door is the only effective means of securing the parking from unauthorized pedestrian access and vehicle use, and for aiding in the deterrence of person-to-person crime in the area.

- Illegitimate access to suites situated at ground level and/or a landscaped roof deck (over parking) level was eliminated, reduced or otherwise controlled. (DESIGN 2 AND 3)

All but one crime prone building contained suites at the ground or second floor featuring glass patio doors to a partially or completely screened outdoor privacy area. Of the two low crime buildings which exhibited this feature, only one was similar to the crime prone sample buildings.[2].

Ground and second floor suites were frequently vacant and always cited as the most difficult to rent. During a site inspection at one of the buildings, the sliding glass doors to a number of vacant suites at the deck level were found to be open. If accommodation must be provided at ground and deck levels, exterior doors could be eliminated, privacy areas could be completely enclosed, barriers (such as grilles, metal bars or heavy screening) could be installed to all vulnerable openings, and there should be adequate access point hardware.

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1. At one prone building, a key-controlled garage door opener was installed subsequent to completion of the survey.

2. At the similar building, two suites were accessible at grade level and two were accessible at the deck level. At the dissimilar building, units at grade were townhouses not connected by an interior corridor.

- There was a minimum number of remote, uncontrolled entrances to the building. (DESIGN 1)

The number and location of entrances/exits at buildings is a function of floor size and shape, the amount of complexity of parking and limitations imposed by the site and surroundings. Apart from the principal entry at the lobby, four of the five low crime buildings contained fewer remote, uncontrolled entry/exits than all crime prone buildings.

Low crime buildings (containing up to 3 such entrances) typically were point or near point towers, with fire exit stairs (leading to fire exit doors) close to the core and lobby area, and with parking and ground floors linked via separate stairs to or near the lobby and exterior. High crime buildings (containing as many as 9 such entrances) typically were slab blocks with a minimum of two fire stair/exit doors remote from the lobby. Convenience entrances from parking to ground floor also make use of these stairs connecting to the upper floors.

- Refuse storage/collection room were key lockable and some were accessible only from the exterior of the building. (DESIGN 9)

Two low crime environments completely externalized refuse collection rooms from the interior of the building, and three were linked to inside by separately keyed interior doors. At crime prone environments, five refuse rooms were linked to the interior by unsecured doors, and three were linked by separately keyed interior doors. Keys to locked exterior doors are usually held by the collection agent, who is asked to assume a great responsibility for access control at buildings with unsecured interior doors leading inside the building.

Where unsecured interior access to the refuse room is essential (i.e. for buildings with suites at ground level), greater security can be gained by key controls to interior and exterior doors which could be activated during hours of greatest vulnerability (0400-1600) if management was aware of these hours, and on non-collection days.

Outside access only refuse rooms also should be key controlled by management. During a site visit (at one building excluded from the final survey group), an investigation was in progress where criminal access to a retail store was gained through the wall separating the store from the external refuse collection room.

- Individual balconies or their entire absence controlled illegitimate access to suites through the abutting doors and/or windows. (DESIGN 4)

Among the low crime buildings one had no balconies, four had individual suite balconies, and only one had paired suite balconies. Two high crime buildings had individual balconies; the other six had paired, multiple or continuous strip suite balconies.

Balconies provide an alternate to the corridor as a means of access or escape at a suite, and in the sample group from 10 to 15 percent of entries were made through doors and windows to balconies.

In newly designed buildings, connecting balconies should be eliminated altogether. At existing buildings, connecting balconies might be alternately screened/enclosed. Alternatively, if connecting balconies are to remain open, barriers (such as grilles, metal bars or heavy screening) could be installed to all vulnerable openings, and there should be adequate access point hardware.

- Access to parking facilities was from the street at the front of the building. (DESIGN 5)

This feature requires the potential offender to increase the risk of discovery associated with illegitimate entry/exit at the more public side of the building - usually better lit, more exposed, seen and used by a greater number of legitimate users. Few residents are around to observe during the day, and many said they feared using poorly lit lanes at night. The potential offender is left with considerable opportunity for illegal access/egress at laneside entryways.

Four of five low crime environments featured streetside access/egress at parking facilities. The access to part or all of the parking facility was from the lane at half (4) of the crime prone buildings.

The following positive feature was not found to be in substantial evidence at any building.

- Elevator service was eliminated to parking levels above or below grade (lobby) level. (DESIGN 8)

One low crime building contained this feature. Stairs linked the parking floors directly to the elevator lobby at the main entrance to the building, meaning all users of the parkade had to move through the public entrance lobby before gaining access to upper floors of suites.

This feature decreases the attractiveness of the structured parking areas as an illegitimate entry/exit point at the building by introducing greater control over who has access to the elevator(s). There is an element of inconvenience for the legitimate user. (Nevertheless, this feature was provided at a building designed as a condominium for middle and upper income residents.) An alternate solution would be to key control the elevator call switch at parking levels.

b) Management Conditions/Control Access and Escape

The following positive features were unique principally to low crime environments.

- Suite locks were changed when new tenant occupied the apartment. (MANAGEMENT 8)

This is a management policy at four of the five[1] low crime environments, and at only one[2] of the crime prone environments.

Strict control of the number and distribution of residents' keys is an impossible task, and locks should always be changed with tenancy. Some managers reported receiving back as many as eight keys from departing suite occupants. Inevitably, keys find their way into the wrong hands and become part of the arsenal of simple tools which aid the opportunists' work. Managers should advise incoming residents that locks have been changed and that they should minimize duplication of keys for their own and others' protection.

- Entrance/exit doors were not habitually propped open. (MANAGEMENT 6)

Residents/manager at the five crime free buildings claimed little or no observation of this condition. At three of the crime prone environments residents noted the condition as a recurring problem. An open door to a building, like an open door to a suite, is an invitation the opportunist cannot ignore. Doors are often propped open for convenience on moving days, by residents carrying in parcels, or for ventilation in stuffy, overheated settings. Residents and management must be vigilant about looking out for this condition and assertive about removing opportunity for its habitual recurrence (e.g. wedges and other implements to keep doors open).

- Managers denied permanent access and unaccompanied movement of service personnel to any part of a building. (MANAGEMENT 4, 5)

Few service people other than the postman had permanent access (keys) to the low crime buildings. Half of the crime prone environments were made accessible to a variety of individuals and organizations, including commercial refuse collectors, the postman, the paper carrier, mechanical repair agents and others who routinely provide services to apartment buildings.

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1. Due to the nature of tenancy offered, the resident turnover at one building is very high and the changing of suite locks is not justified.

2. The policy was not in effect during the period of time B&E statistics were documented for the sample group.

Even assuming that none of these individuals is an offender (and some are) there is always the possibility of loss or theft of keys from those who keep them. This could compromise the entire security system of a building. Managers must assume the responsibility for giving access to such people when it is required, accompany individuals to their destination and accept the inconvenience created by possible (daily) need for such access to a building.

- Managers support residents who wish to assume their responsibility for crime prevention by installing additional locks to suite door and window entry points.

At most buildings there are instances where additional security is wanted and necessary, and when residents recognize their vulnerability, management should not stand in their way. Windows and doors to ground and second floors, and balconies are a common concern of residents. Residents also worry about added security at the entry door when they occupy the suite.

At 4 of the low crime environments[1] management normally permits tenants to install additional locks and some of the respondents at each building indicated they had done so. Among the high crime buildings, residents at only half (4) of the buildings had taken such action with the support of management.

The following positive features were largely in evidence at both low crime and crime prone environments.

- Manager inspects condition of hardware at entrances on daily basis, and makes good any deficiencies. (MANAGEMENT 2)

The managers at all but one building claimed they inspected the building at least once per day (one claimed six inspections per day) to identify vulnerable conditions at access/egress points at and within the building. This is the first step in ensuring that all security features function in the intended way, and should be common practice. The observations made during site inspections indicate that follow-up on found deficiencies is not at all consistent among the crime prone environments.

- Most residents lock suite entry door during occupancy and every time they leave the suite. (MANAGEMENT 9)

With one exception at a high crime building, most residents at each building reported they consistently lock the entry door every time they leave their suite. However, as noted from the analysis of offense reports at least 20 percent of break and enter offenses are committed through an unlocked door.

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1. Neither manager nor resident responses were available on this item at the fifth low crime environment.

Regardless of a lockset's quality, it must be set to be at all effective. Since the locked door is the last line of defense for an occupant, residents must be trained to be vigilant about this essential, common sense practice.

- Residents deny strangers access to the building. (MANAGEMENT 7)

Responding residents reported at all but two crime prone environments that they did not normally admit strangers to the building. Nevertheless, many residents cannot distinguish between an unfamiliar resident who has a legitimate reason for entry and an unfamiliar person intent on illegitimate entry. The normal resident wishes to be reasonably cooperative; the opportunist is well aware of the behaviour pattern and preys upon it.

Management should establish a policy on emergency access (e.g. keys left within) for legitimate residents. Residents must be made to feel comfortable and responsible for questioning strangers who seek access, and exercising their obligation to other residents to deny access to suspicious individuals.

The following positive features were not found to be in substantial evidence at any building:

- Use of security personnel to control access/egress and observe movement within the building.

The presence of "security personnel" at a building is thought to be one of the most effective deterrents to the would-be offender. Security staff implement a formal surveillance program and report/act on offensive/illegal behaviour.

Among the sample group security personnel are employed on a permanent basis at two buildings, one low crime and one high crime environment. Security personnel were employed at the low crime environment throughout the duration of the data collection period (1980-1983). At the high crime environment security personnel were employed as a strategy to reduce the high incidence of crime recorded during the same period. The owner/manager claims the presence of security personnel has had a major impact on the incidence of all crime at the building.

There was a predominance of limited support for employment of security personnel at the low crime environments. At four of five low crime environments, some residents indicated they would pay for 6 a.m. security. Residents at three of the eight high crime environments indicated they would pay for the service.

- Locking the building from within during nighttime hours.

This is an effective way to limit access to a building, however, it is an impractical strategy in most instances. It precludes use of the intercom/door control as a means of entry by the would-be offender but means denying residents and other legitimate users

the right to come and go as and when they please. In certain instances, the action may also violate the Fire Code. Two senior citizens buildings, one low crime and the other a crime prone environment, noted an attempted use of this approach.

5.3.2 Surveillance Capability

The ease and capability for an environment to be formally or informally surveyed as one moves through it has the potential of reducing crime by putting the offender under an increased threat of being observed, identified and reported to the authorities.

FIGURE 5.2 represents findings with respect to the capability for surveillance at the sample buildings. Nineteen design features and four management features are listed in the chart. The chart indicates that a larger number of the listed positive surveillance design features were present in the low crime group than in most of the crime prone group.[1]

There is no evidence that particular management features in relation to surveillance potential vary between the low incident and crime prone groups.

a) Design Conditions/Surveillance Capability

The following positive features are unique principally to low crime environments.

- A wide angle viewing device at each suite entryway. (DESIGN 11)

A suite to corridor viewing device was installed to suite entry doors at four of the five low crime environments, and at two of the eight crime prone environments.

The wide angle viewing device allows an occupant to look into a hallway without unlocking/opening a door. A case hardened chain lock would serve a similar purpose, but a chain can be broken by a determined intruder. This and other surveillance devices can only be considered truly effective when used in conjunction with a tenant education program.

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1. Three of the crime prone environments contained a similar number of surveillance features as the low crime environments.

FIGURE 5.2.1: DESIGN & MANAGEMENT CONDITIONS

SURVEILLANCE CAPABILITY

○ = No/None
◒ = To Some extent/<50%
◓ = To considerable extent/>50%
● = Yes/All

DESIGN	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B&E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	13	19	4	8	14	3	16	18	1	2
1. Good visibility between street vestibule, lobby waiting area and elevator doors.	●	◒	●	◒	●	○	◒	◒	○	○	◒	◒	○
2. Fire exit doors are visible from public way in front of or to rear of building.	○	◒	◒	◒	●	◒	◒	◒	●	●	●	○	○
3. Mailbox area visible from street and/or other public way.	◒	◒	○	◒	◒	○	◒	●	○	○	◒	●	○
4. Visibility from street/ exterior to exit stairs and/or lobby space on typical floor.	○	○	○	○	○	◒	◒	◒	◒	○	◒	○	○
5. Adequate incandescent/other lighting to entry/exit points.	◒	●	●	●	●	○	●	◒	◒	○	◒	◒	◒

FIGURE 5.2.2: DESIGN & MANAGEMENT CONDITIONS

○ = No/None
◒ = To Some extent/<50%
◓ = To considerable extent/>50%
● = Yes/All

SURVEILLANCE CAPABILITY

DESIGN	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B&E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	13	19	4	8	14	3	16	18	1	2
6. Lobby, elevator visible from occupied control point.	◒	◒	◒	●	◒	◒	◒	◒	◒	○	◒	○	○
7. Visibility from suite entry to other doors, hall & elevators.	◒	◒	○	◒	◒	●	◒	○	◒	●	◒	◒	◒
8. Exit stairs & corridors can be observed prior to passage between one and the other.	○	○	○	○	○	○	○	○	○	○	○	○	○
9. Incandescent lighting to typical corridor is uniform and adequate.	●	●	●	●	●	◒	◒	◒	●	◒	●	●	●
10. Adequate fluorescent/ incandescent lighting to painted stairwells.	●	●	●	●	●	●	●	◒	◒	◒	●	●	◒

FIGURE 5.2.3 · DESIGN & MANAGEMENT CONDITIONS

○ = No/None
◒ = To Some extent/<50%
◓ = To considerable extent/>50%
● = Yes/All

SURVEILLANCE CAPABILITY

DESIGN	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B&E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	13	19	4	8	14	3	16	18	1	2
11. Corridor can be observed from suite.	●	●	○	●	●	○	●	○	○	○	●	○	○
12. Amenity space is visible from public way at exterior of building.	○	◒	○	◒	◒	○	◒	○	○	○	○	○	○
13. Amenity space is visible from within the building.	○	●	○	◒	◒	◒	●	○	○	○	◒	○	○
14. Visibility from within building to parking floors.	○	◒	○	○	○	○	◒	○	○	○	○	○	○
15. Adequate incandescent/ fluorescent lighting to painted covered/enclosed parking.	◒		●	◒	◒	●		○	◒	◒	◒	◒	○

FIGURE 5.2.4 : DESIGN & MANAGEMENT CONDITIONS

SURVEILLANCE CAPABILITY

○ = No/None
◒ = To Some extent/<50%
◓ = To considerable extent/>50%
● = Yes/All

DESIGN	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B&E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	13	19	4	8	14	3	16	18	1	2
16. Adequate incandescent/high pressure sodium or equivalent lighting to uncovered surface parking.		●	●			○	◓	◒		○		◒	
17. Parking floors/parking lot are visible from lane.		●	●		●	●	●	●		◒	○	○	○
18. Lane is well lit at night.	○	○	◒	◒	●	○	●	○	○	◒	○	◒	○
19. Landscaped roof deck is well lit during evening/night.	●			◒					○		◓	○	◒

FIGURE 5.2.5 : DESIGN & MANAGEMENT CONDITIONS

○ = No/None
◒ = To Some extent/<50%
◒ = To considerable extent/>50%
● = Yes/All

SURVEILLANCE CAPABILITY

MANAGEMENT	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B&E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	13	19	4	8	14	3	16	18	1	2
1. Light fixtures are usually working in all areas.	◒	◒	◒	●	●	●	●	◒	◒	◒	●	◒	◒
2. Address of building is clearly marked at street and lane, day and night.	◒	◒	◒	◒	◒	◒	◒	◒	◒	◒	◒	◒	◒
3. Police presence at building is adequate, according to majority residents and management.	○	○	◒	◒	◒	○	○	◒	○	○	◒	○	○
4. A resident-based watch program is operating at the building.	○	○	○	○	○	○	○	○	○	○	○	○	○

- Interior public areas such as entry vestibule, lobby, elevator waiting/door area were visible from the street and from each other. (DESIGN 2)

The design of all low crime buildings, with one exception,[1] provided for a high degree of visibility between these areas. At five of the eight crime prone buildings, there was little or no visibility between these areas. Visibility was moderately good at the other three crime prone buildings.

At the low crime environments the front entrance typically faced the sidewalk/street; entrance vestibule and lobby waiting area were contiguous and glazed to the street side and elevator doors exited directly into the lobby and faced the sidewalk/street. At crime prone environments some entryways were obscured from the street (turned at 90 degrees), lobby waiting areas were internalized (little or no glazing to street) and elevators were off-set and not visible from the main entry area.

Unnecessary obstacles to informal and formal surveillance should be eliminated where possible. Interior furnishings (such as drapes or screens) should not preclude surveillance which is otherwise possible. Residents' feelings of security and absence of fear also increase when they know there is a greater risk of apprehension to a potential offender. They are also better able to assume responsibility to look out for and report on unusual and/or illegal behaviour.

- Good lighting (even and without deep shadows) was provided to uncovered surface parking areas. (DESIGN 16)

The two low crime environments with uncovered surface parking facility provided excellent high pressure sodium lighting to these areas. In terms of lighting intensity these two parking lot areas may have been considered "overlit" by some residents occupying suites close to the ground level. Five crime prone buildings featured an open parking facility. Three were mainly dark, being poorly lit by a few incandescent bulbs to the face of the building, and two were moderately well lit (but characterised by dark and light areas) by incandescent spot fixtures.

Good lighting serves to decrease some residents' sense of fear and increases the opportunities for informal or formal surveillance where the lines of sight have been maintained. Good lighting is most effective when it is combined with other tactics such as "target hardening" (i.e. increasing the difficulty of illegal access) and greater control of access and escape.

---

1. This building maintains a permanent security staff situated at the lobby entrance and the design allows for complete surveillance of the public entry/circulation area at grade.

When planning a lighting program, local concerns and considerations should be accommodated. Where residents are fearful of crime, high intensity lights may be welcomed; where fear is less (though key crimes may be equal), they may object to the color or intensity of lights. Fixtures are available which remedy these and other objections of nearby residents.

- Good lighting (even and without deep shadows) was provided to painted wall and ceiling surfaces in covered and completely enclosed parking structures. (DESIGN 15)

The best lit parking structures provided fluorescent strip lighting or a double row of incandescent fixtures above the stalls, shielded for protection from damage, to partially painted concrete walls and ceilings. This was the condition at three of the four low crime buildings with structured parking. A single row of incandescent lights above the aisle, usually unprotected, was the condition found at four of the seven crime prone buildings.[1] At several buildings the floor to underside of ceiling light fixture dimension was insufficient to prevent high vehicles (vans, etc.) habitually striking and breaking the bulbs.

Caged fluorescent fixtures located above parking stalls (not the aisle where a vehicle will light the way), fully painted ceiling and walls (with a light reflective color) provide the best lighting. Clear definition of stalls and column corners (with paint) will aid in minimizing inadvertant vehicle to vehicle damage. Special attention should be directed to overlighting blind spots (corners and alcoves) to decrease their attractiveness to the potential offender.

- Good outdoor lighting was provided to entry/exit points at the building, and to landscaped roof decks. (DESIGN 5 AND 19)

Yard, landscaped deck and entry/exit lighting was found adequate to excellent at all five low crime environments. Among the eight crime prone buildings, the lighting was largely inadequate at half of the buildings, and acceptable to excellent at the other half. At these poorly lit environments, the main lighting improvements needed are:

---

1. Lighting to structured parking at three crime prone buildings was equal to that seen at low crime environments. One building contained unprotected poorly lit outdoor parking, half of the structural parking at the two was characterised by unrestricted public access and no control of specified access/egress ways. If the offense reports for theft from vehicles were specific about the location of the vehicle attacked, they would likely show that a majority of the thefts from vehicles occurred in the more unprotected portions of the parking at these buildings.

- low level, even distribution front and side yard lights;
- high intensity fixtures to remote exit doors, especially those partially or completely hidden from view;
- properly aimed light fixtures (e.g. spot fixtures to light ramps, driveways and parking areas frequently shine into driver's eyes and reduce visibility); and
- walkway lighting to front of building.

- Good lighting was provided to the lane behind the building. (DESIGN 18)

At the low crime environments, lane lighting was good to excellent at three of the five buildings. On-site fixtures were the source of light. At those two low crime buildings where lane lighting was poor, surface and structured parking were not accessible from the lane.[1] Few residents had any reason to use the lane and potential offenders could not gain access there.

Among the crime prone environments, lane lighting was good at only two of the eight buildings. There was no lighting from fixtures on-site at the others.

Many respondents to the resident surveys noted they did not walk in the lane during nighttime hours because they were poorly lit and people were fearful of those conditions. The absence of informal observers and little or no lighting are ideal conditions for gaining illegitimate access to a building or its parking facilities.

- The entrance lobby and elevator entry area more visible from an occupied control point. (DESIGN 6)

There was extensive visibility between these areas and a control point at the low crime environments. While formal, continuous surveillance was provided only at a single building, routine informal surveillance is made possible by visual link from one or more of a manager's suite and/or manager's office and/or ground level business offices to the lobby/elevator area.

At the high crime environments, three buildings had no control point; three had ineffective visual links between the two areas, and two had visibility as good as that found at the low crime buildings.

At new buildings, these areas should be situated and designed so as to allow for informal or formal viewing from one to the other. At existing buildings it may be feasible to add windows between the affected interior spaces, and achieve the same objective. Alternately, parabolic mirrors can be used to improve surveillance in certain critical areas on an as needed basis to formalize the surveillance process.

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1. The above mentioned is by way of explanation and is not justification of a case for inadequate lighting.

- Amenity space(s) within buildings were visible from adjacent interior and exterior public ways. (DESIGN 12 AND 13)

and,

- Vulnerable areas were located near those which are actively used. (DESIGN 12 AND 13)

Managers at all buildings reported vandalism to entry areas, lobbies, elevators and hallways. However, the interior resident amenity space was the area found most susceptible to theft and vandalism at the sample group of buildings (suggesting that considerable vandalism is caused by some residents and/or their friends). If left unattended, a continuous cycle of use and abuse could lead to a state of disrepair and ultimate closure of the area to residents (which has happened at two buildings).

The location of amenity spaces should be nearby to busy areas of the building (e.g. abutting the lobby or ground floor corridor) and they should provide glazing to interior and/or exterior public ways. This increases the risk of discovery for the potential offender and makes the space a less attractive target.

The amenity area(s) were situated at the ground floor at four of the five low crime buildings. At five of the crime prone buildings, these spaces were located in the basement or at the second floor.

These were examples of non-existent to excellent visibility at the low and high crime environments. However, only two of the five low crime environments had visually inaccessible amenity spaces while six of the eight high crime buildings contained visually inaccessible amenity spaces.

- Mailbox areas were visible from street and/or other public way. (DESIGN 3)

Break-ins at mailboxes were rarely reported by managers or residents in the survey responses.

There was a measure of control provided to mailbox areas in all but two buildings (these two were in the crime prone group). The control was achieved more by the areas' location nearby a manager's suite or office than through visibility from a public area outside the buildings. However, management offices are rarely manned at night and are usually vacant off and on during the day.

Three of the five low crime buildings[1] and four of the eight crime prone buildings featured publicly visible mailbox delivery areas.

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1. One of the other two maintained a permanent security staff who were able to watch over the area.

- Visibility was maintained from the lane or street to uncontrolled parking areas.

Good visibility to uncontrolled parking (open and covered) was characteristic of all low crime buildings with the feature. There was no such visibility in five of the eight crime prone buildings with similar parking features, making casual or formal surveillance impossible for residents or police.

The following positive features were found to be in evidence at both low crime and crime prone environments.

- Fire exit doors were visible from a public way in front of or to rear of building. (DESIGN 2)

Emergency stair and exit doors are normally restricted to their intended use by the provision of self-closing and self-locking doors. Respondents indicated that among the sample buildings these exits were not usually abused by residents; not propped open or left with damaged hardware for any length of time. Making these potential access/egress points visible from the street (ideally) or lane (acceptable) would further decrease their attractiveness to the potential offender as a place where he could enter or leave the building unnoticed.

The visibility possible from the street or lane to the exit doors at a building ranged from poor to excellent among the low crime and crime prone buildings.

At three buildings the doors were completely hidden from sight (obscured by a fence, part of the building or below grade level). At two other buildings doors faced the public way but portions of the buildings screened them from view. At the remaining buildings visibility to these doors was excellent from the lane or street.

At new buildings, these areas should be situated and designed as as to allow for informal or formal viewing from one to the other. At existing buildings it may be feasible to add windows between the affected interior spaces, and achieve the same objective. Alternately, parabolic mirrors can be used to improve surveillance in certain critical areas on an as-needed basis, to formalize the surveillance process.

- Uniform and adequate lighting was maintained to typical corridor. (DESIGN 10)

Proper lighting enhances the opportunity for and effectiveness of casual or formal surveillance, and reduces the feelings of fear frequently associated with poorly lit (shadowed) areas.

Apart from one building in the crime prone group, all others exhibited acceptable lighting to typical corridors.

- Uniform and adequate lighting was maintained to typical stairwell. (DESIGN 9)

In addition to the same benefits as noted above, good lighting is essential for safety from falls in stairways. Apart from two buildings in the crime prone group all stairwells were adequately lit, and had walls painted in a light, reflective natural color.

The following positive features were not found to be in evidence at any of the sample buildings:

- Glazing between exit stair and corridor to allow observation prior to passage between one and the other. (DESIGN 8)

- Glazing between any parking area and the interior of a building, particularly at connecting doors. (DESIGN 14)

No sample building exhibited either of these features and no claim about the benefits can be suggested from the information. However, the logic is similar to all the other guidelines respecting surveillance and the feature ought to be considered, and any feature which facilitates the use or initiation of a successful "watch" program ought to be considered in new buildings.

b) Management Conditions/Surveillance Capability

The survey responses show that there are no surveillance management features peculiar to only the low crime or only the crime prone group. The listed positive features were largely present or largely absent across from all the buildings. The following guidelines are based on the positive features found to be in evidence at both low crime and crime prone environments.

- Light fixtures in all areas were usually in proper working order. (MANAGEMENT 1)

The maintenance of fixtures in good working order allows for the observation and surveillance intended by their provision, and places the potential offender on notice that residents and managers are concerned about and look out for their environment.

There was little evidence (from residents or by observation) to suggest that this condition was not a concern of managers at the case study buildings. Upkeep of light fixtures was good to excellent at all but two of the crime prone buildings, where many bare incandescent lights to the parking structure were broken.[1]

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1. Both buildings featured uncontrolled access to the parking structures.

- Buildings were identified in the street but not the laneway. (MANAGEMENT 2)

When the name and street number of a building is clearly posted and lighted in the street and laneway, police, residents and other legitimate services will be assisted when approaching, particularly from the lane.

The name and address of all buildings was visible day and night at streetside. No building name or address was posted at the lane.

Other positive conditions not found to be in evidence at any of the sample buildings:

- Adequate police presence, in terms of patrol levels and procedures. (MANAGEMENT 3)

The opinion of resident respondents and most managers was that extended police presence in the vicinity of their building was inadequate to have any beneficial effect on prevention of B&E, theft from vehicles or undesirable social behaviours such as public drunkenness, street prostitution, noise or verbal abuse which concern residents. One exception was at a high crime building (nearby the district station) where police and management worked together to reduce a plethora of socially unacceptable and illegal behaviour within the building. The manager reported this to have been effective in combination with an aggressive eviction policy to eliminate the troublemakers. The majority of respondents reported feeling insecure in parking areas and the neighbourhood environment. Yet, it is in the neighbourhood setting that the police presence (as a deterrant to criminals) can be established most simply and would likely have considerable benefit. A strong police presence can deter crime, and patrol activities might be increased during peak crime hours. Effective tactics include: foot patrols, which have the advantage of strengthening police-community relations; providing a show of force by flooding a problem area with extra patrols; and equipping officers with bicycles or scooters to patrol areas not accessible to cars.

- Use of manager/resident based "watch programs". (MANAGEMENT 4)

No resident based "watch" program was operating at any building in the sample group.

Programs such as "Block Watch" and "Neighbourhood Watch" are widely used particularly in the suburban areas of many communities. Such programs vary greatly as to the formality of their structure and the extent of police cooperation. However, all watch programs include organized, scheduled surveillance amongst their activities. Perhaps an individual is assigned to monitor a fixed number of residences, or less elaborately a buddy system may be implemented during vacation periods. Crime

reporting is an integral part of a watch program. Its effectiveness is further enhanced when it is combined with other crime-control activities such as security surveys and property-marking projects. There is considerable scope for the implementation of a number of these activities at area buildings.

- At only one (low crime) condominium building had management requested a security survey, and acted on most of the recommendations.

- At only one (high crime, seniors) building had management arranged for the police service to provide advice to residents on safety and security.

- A management policy for reporting crimes at the building, and residents' awareness of it is non-existent at most buildings.

- Manager and resident awareness of and use of common crime prevention techniques are at a very low level.

- Few residents had marked property and managers do not promote the use of this technique.

Watch programs require a high level of citizen involvement and previous analysis indicates this will be difficult to achieve in areas and buildings such as those in this study. Individuals who take part in club and other social activities are more likely to take part in crime prevention activities, and few respondents were actively involved in neighbourhood based organizations. The implementation of an experimental watch program at one or more area buildings would likely have the greatest potential for success given the following considerations:

- building owners and manager must visibly demonstrate commitment to crime control at the building;

- building owners must actively promote manager and residents' actions to combat physical vulnerabilities at the buildings which cannot be corrected feasibly through physical modification of the building.

- programs should be resident manager/police service led; and

- such activities should begin with a program of change to correct the deficiencies noted above.

5.3.3 Technical Difficulty and Risk

Physical devices which increase the technical difficulty of illegal access at a specific location (such as improved quality in door and window frames, adequate hinges, more and better locks, stronger glazing, solid door and others) are known as target hardening techniques. Through increasing the technical difficulty of committing a crime, target hardening devices are expected to

decrease vulnerability from two aspects. First, the potential criminal will not easily possess the necessary skills or tools to overcome the devices. Second, the time required to overcome the device will be sufficiently long to seem prohibitive due to fear of detection or apprehension.

FIGURE 5.3 presents findings with respect to target hardening devices and practices at the sample buildings.

Fifteen design features and three management features are listed in the chart. More of the positive design features increasing technical difficulty and risk of illegal access were in evidence at the low crime environments than among the crime prone buildings. There is limited indication that management efforts contribute towards increasing the technical difficulty and risk of illegal access at the low crime environments.

a) Design Features/Technical Difficulty and Use of Illegal Access

The following positive features were found to be in evidence principally at low crime environments.

- Keylocks or other effective protection was provided against illegal access to all exterior suite doors and windows located at the ground level and the landscaped deck level. (DESIGN 3, 4)

There were fewer suites at the ground and deck levels among the low crime buildings than at the crime prone buildings.

Four of the five low crime environments provided protection against illegal entry to a suite, but none used key control of exterior access points. The placement of pins to prevent removal of sliding glass doors and windows, and the use of horizontal bars to prevent opening such doors and windows was the extent of such protection. None of the high crime environments provided key control or any other form of protection against intrusion.

- An astragal plate was placed to most every access/egress door at the building.

An astragal plate, a protective steel cover plate to a lockset, provides a considerable measure of protection against illegal access gained through prying or otherwise cheating a lock bolt.

At the low crime environments, protective steel plates covered the lock mechanisms to most of the access/egress doors, fire exits, convenience access/egress ways and the main entry door. Among the high crime environments, two buildings provided astragal plates to most doors;[1] two buildings provided astragal plates to the only front entrance door and at four buildings there was no such protection at all.

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1. A sliding glass door to a hidden, but accessible greenhouse at one building made it particularly vulnerable.

FIGURE 5.3.1 : DESIGN & MANAGEMENT CONDITIONS

TECHNICAL DIFFICULTY & RISK

○ = No/None
◒ = To Some extent/<50%
◓ = To considerable extent/>50%
● = Yes/All

DESIGN	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B&E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	15	19	4	8	14	3	16	18	1	2
1. All access/egress doors to building have astragal plates.	◒	◒	●	◒	◒	○	◒	○	◒	◒	◒	○	○
2. The intercom system does not relate the resident's name with the person's location in the building.	●	●	●	●	●	●	○	◒	○	○	●	○	○
3. All exterior suite doors at ground level & 2 floor deck level are key lockable or other wise protected from access.	○			◒	◒	○			○	○	○		○
4. All operable windows at ground & 2 floor deck are key lockable or otherwise protected from access (e.g. grills).	○	●	●	◒	●	○			○	○	○	○	○
5. Doors and windows to balconies are key lockable or otherwise protected from access.	○		○	○	○	○	○	○	○	○	○	○	○

FIGURE 5.3.2 : DESIGN & MANAGEMENT CONDITIONS

TECHNICAL DIFFICILTY & RISK

○ = No/None
◒ = To Some extent/<50%
◓ = To considerable extent/>50%
● = Yes/All

DESIGN	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B&E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	13	19	4	8	14	3	16	18	1	2
6.Hardware to suite entry doors is a minimum 1" deadbolt with door frame properly pinned to wall system to eliminate spread	●	◒	◒	●	●	○	◒	○	◒	◒	◒	●	◒
7. Laundry room is key controlled.		○	●	●		●	○	○	○	○	◒	●	●
9. Garbage room is key controlled.	●	●	◒	◒	●	○	○	○	◒	◒	○	◒	◒
10. Tenant storage rooms are key controlled.	●			●	●			●	●	●	●		●
11. Amenity rooms are key controlled.	●	○	●	●	●	●	○	●	●	●	●	●	●

FIGURE 5.3.3 : DESIGN & MANAGEMENT CONDITIONS

TECHNICAL DIFFICILTY & RISK

○ = No/None
◐ = To Some extent/<50%
◑ = To considerable extent/>50%
● = Yes/All

DESIGN	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B&E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	13	19	4	8	14	3	16	18	1	2
12. Access control mechanisms for garage door cannot be easily controlled.	○		○	○ ○		○		●	○ ○		○ ○		
13. Master key system not easily copied.	○	○	○	●	●	○	○	○	○	○	○	○	○
14. Surveillance cameras are used at the building.	○	○	○	○	○	○	○	○	○	○	○	○	○
15. Burglar alarm system is in use at the building.	○	○	○	○	○	○	○	○	○	○	○	○	○

FIGURE 5.3.4 : DESIGN & MANAGEMENT CONDITIONS

TECHNICAL DIFFICILTY & RISK

○ = No/None
◒ = To Some extent/<50%
◓ = To considerable extent/>50%
● = Yes/All

MANAGEMENT	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B&E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	13	19	4	8	14	3	16	18	1	2
1. Hardware to access/egress points at building is maintained in sound operating condition.	◒	◒	●	◒	◒	○	●	○	◒	◒	●	◒	○
2. Building has been rekeyed in last 12 months.	○	○	○	○		○	○	●	○	○	○	○	●
3. Residents ask if locks were changed prior to moving in.	◒	◒		◒		○	○	◒	◒	○	◒	○	○

- A code number on the intercom call board prevented correlation of a surname with a particular suite. (DESIGN 2)

Intercom systems provide a technique for screening visitors before they move past the entrance vestibule, and all sample buildings had an intercom. They also can be used effectively by a potential offender to gain access to the building and to ascertain the presence or absence of a resident in any suite. The effectiveness of these systems is entirely dependent upon the care exercised by residents when answering their buzzers. The withholding of reference to sex, and inability to correlate a name to a suite location in a building on a call board increases the difficulty for a potential offender to take stock of a building. Clearly, the effectiveness of the intercom system as a control measure must be considered in conjunction with a program of tenant education.

At all low crime environments complete resident/suite anonymity was maintained on the call board. Two high crime environments maintained resident/suite anonymity, one provided names with no location and the other five revealed names and correlated them with a suite number in the building.

- Suite access point hardware was of sufficient strength. (DESIGN 6)

The suite entry door is the most common point of entry for the offender, and there would likely be a considerable reduction in the number of B&E offenses with sturdier access point hardware. A deadbolt lock with a minimum 1" throw should be provided to each suite entry. The structural integrity of the door frame should be maintained with a sufficient number of horizontally placed keys to minimize twisting, and adequately pinned to the stud wall system to limit the potential to spread the frame (and, therefore, spring a deadbolt).

At the low crime environments, suite entry door frames were firmly braced laterally and horizontally. At three buildings, one inch deadbolts were in use throughout; one-half inch deadbolts (barely adequate) were in use at the other low crime buildings.

Among the high crime environments, conditions were considerably different with the exception of two buildings where sturdy frames and one inch deadbolts were in use. Half-inch deadbolts were in use in six buildings. At two of those buildings, door frames could be spread without the use of tools sufficiently to spring the deadbolt lock. Small tools would enable similar access at the other buildings.

Some residents at all of the low crime environments reported having installed additional locks to supplement suite entry doors and windows, and noted that management did not object to the additional locks. At half of the low crime environments, tenants had not installed additional locks, and they indicated management did not normally permit tenants to install additional locks.

- Key controlled access was provided to the refuse room and laundry room.

Access limited by the use of a key makes it much easier to identify the legitimate uses of an area, while greatly increasing the effort necessary for an offender to gain access to it. The success of the approach necessarily depends on a strict key control policy and limiting the number of people who share the sub-environment.

Laundry Room.

Three of the five low crime environments provide a common laundry facility; two provide a laundry facility within each suite. Two of the common laundry rooms were key controlled (locked during nighttime hours) and one was always open. At half of the high crime buildings, the laundry facility was always accessible.

Refuse Room.

All buildings had a central refuse room for the temporary storage of garbage awaiting removal from the premises.

Among the low crime environments separate key control by management was provided to each refuse room door at three buildings; management key control was provided to only the outside door at two buildings. Among the high crime environments, at four buildings residents and collectors controlled interior and exterior doors respectively; at two buildings interior doors were always open and collectors controlled exterior doors; and at two other buildings management key control was provided only to the exterior door.

The following positive feature was found substantially in evidence at both low crime and crime prone environments.

- Key controlled access was provided to the tenant storage and amenity room(s) sub-environments.

Tenant storage room.

All tenant storage rooms were key controlled by residents.

Amenity room(s).

Amenity rooms are key controlled by manager and residents at all sample buildings except the two senior citizen residences included in the sample.[1]

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1. All amenity/service spaces in these two buildings are on the ground floor, highly visible.

The following positive features were found not to be in substantial evidence at any building.

- The operating mechanism for garage door cannot be easily duplicated. (DESIGN 12)

A number of door control systems are available including key operated, radio-controlled, card operated and encoded card operated systems. The encoded card system is regarded as the most secure, because it utilizes a changeable code to activate the door. Among the eight buildings which contained access-controlled parking (4 low crime, 4 high crime), only one (a high crime environment) utilized the encoded card system. All others used a key-activated system, which affords easy duplication.

Among the range of control strategies which could be considered for parking area vehicle entry/exit ways, this is probably of lowest priority relative to the other techniques which could be put into place.

- Doors and windows to balconies are key lockable, or otherwise prevent access at these points. (DESIGN 5)

The crime analysis indicated that a significant percentage of entries were through a window or door to a balcony. Yet, neither low crime or high crime environments provided key lockable doors and windows to balconies. None of the low crime environments had adjoining balconies, so it would seem there is greater need for control of these access/egress points at buildings which have adjoining or strip balconies.

- Surveillance cameras. (DESIGN 14)

Surveillance cameras or CCTV (i.e. closed circuit television) are not in use at any of the sample buildings.

- Burglar alarms. (DESIGN 15)

Burglar alarms were not in use at any of the sample buildings.

- Master key system cannot be duplicated easily.

From a practical and legal standpoint, suites in an apartment building must be made accessible to managers for emergency and servicing purposes, and in the event a resident has lost or left keys inside. Master keying is a convenience for managers, allowing universal access to all locksets using a single key, while providing an individual key which works only in its companion lockset for each suite. A duplicate master key in the hand of a would-be offender provides instant access to every locked door in a building. Some commercially available master key systems significantly increase the difficulty of duplication using locksmith licensing provisions, restrictions in the availability of duplicating equipment and complex pinning.

A master key system was in use at 12 of the 13 sample buildings. A system similar to the one described above was in use at only one of the 12 buildings. At the 13th building, an operating condominium, only each suite's owner had key access to the particular suite.

b) Management Conditions/Technical Difficulty and Risk of Illegal Access

The following positive features were found to be in evidence principally at low crime environments.

- Hardware to access/egress points at building was maintained in sound operating condition.

When hardware to access/egress points is allowed to deteriorate, illegal access to a building is made that much easier. Furthermore, the condition implies that management and/or residents are unconcerned about preventing such access.

At the low crime environments, there were few signs of deteriorated hardware except at one building where the lockset to the exterior refuse room at one entry from parking made both doors accessible without a key (by using a plastic card).

At the high crime environments, five of the eight buildings exhibited multiple cases of deteriorated hardware typified by the examples cited below:

- improperly hung exit doors which could not be closed by automatic closers;
- loose, poorly fitting and/or missing portions of locksets (e.g. strike plates) rendering the hardware useless;
- double-wide doors with locksets enabling them to be opened with a good pull (outside) or a shove (inside);
- tolerances too excessive on entry and exit doors which, without an astragal plate, were easily opened without a key; and
- garage doors not fully lowered which could be opened using a stick or other object to interrupt the electonic eye switch immediately inside the base of the door.
- Residents confirmed that locks were changed during change in tenancy.

Some responding residents at three of the five low crime environments[1] and at three of the eight high crime environments confirmed the change in locks.

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1. Among the other two buildings, one was an operating condominium where each owner was responsible for his own lockset and key, the other was a short term tenancy building where changing locksets was impractical.

5.3.4 Social Organization of Residents and Managers

Increasing control of access and escape, improving surveillance potential within and outside a building, and increasing the technical difficulty and risk of access all work together to enhance the likelihood that a would-be offender will be observed in the act. However, for any design strategy to be effective it is not enough that suspicious or criminal behaviour be observed. The observer must be willing to respond with (or call for) assistance for the person or property being victimized. The social organization of residents and managers, that is, the sense of community among residents and felt obligation to one another, is a key determinant of that willingness to intervene in the event of suspicious or illegal behaviour. FIGURE 5.4 presents findings from questions asked of residents and managers to assess the nature of socialization among residents within buildings and in the community. Conclusions drawn from the findings are described in the balance of this section.

- Residents and managers are not active in any orgnizations which meet in the area. (CONDITIONS 1, 6)

In many neighbourhoods and communities within a city, one or more local religious, community, service or recreational organizations are focal points for an area's residents. Identifying the participation level in such organizations is one measuring stick for judging the sense of neighbourhood ownership and responsibility felt for its protection by the area residents.

Regardless of their specific purpose, organizations provide an opportunity for residents to share concerns about local problems (such as crime), can be a vehicle for public expression of individual and group concerns, a catalyst which motivates people to action and a platform for imparting knowledge and skills to residents. Experience in other communities has shown that individuals who take part in club or other social/organizational activities are more likely to take part in crime prevention activities and the same is true for neighbourhoods as a whole.

No responding residents and managers at the sample buildings are especially active in organizations which meet in the area. However, it is possible to distinguish between the low crime and crime prone groups. At all five low crime environments, there is some resident/manager participation in local groups (usually a religious organization). Managers at four buildings noted some personal involvement, and some residents at two buildings noted such involvement.

At the crime prone group of buildings, some manager/resident involvement was recorded at only half (four) of the buildings. Among those buildings, managers were active at three, and residents were active at two buildings.

FIGURE 5.4.1 : DESIGN & MANAGEMENT CONDITIONS

○ = No/None
◒ = To Some extent/<50%
◓ = To considerable extent/>50%
● = Yes/All

SOCIAL ORGANIZATION OF RESIDENTS AND MANAGERS

CONDITIONS	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B&E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	13	19	4	8	14	3	16	18	1	2
1. Residents are active members of religious/community/ service/recreational organizations that meet in the area.	○	◒		◒	○	○	◒	○	○	○	○	○	◒
2. Residents recognize and know most other residents in the building.	◒	◒		◒	◒	○	●	○	○	◒	○	○	○
3. Residents want to know others in the building.	◒	◒		◒	◒	◒	○	◒	●	◒	◒	○	●
4. Residents will look after a neighbour's vacant apartment.	◒	◒		◒	◒	◒	◒	◒	○	◒	◒	○	◒
5. There is a tenants' organization at the building.	○	●	○	○	●	○	●	○	○	○	○	○	○

FIGURE 5.4.2: DESIGN & MANAGEMENT CONDITIONS

○ = No/None
◒ = To Some extent/<50%
◓ = To considerable extent/>50%
● = Yes/All

SOCIAL ORGANIZATION OF RESIDENTS AND MANAGERS

CONDITIONS	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B&E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	15	19	4	8	14	3	16	18	1	2
6. Managers are active members of religious/community/ service/recreational organizations that meet in the area.	◒	◒	◒	○	◒	◒	●	◒	○	○	○	○	○
7. Manager recognizes and knows most other residents in the building.	●	●	●	●	●	●	●	●	○	●	●	●	●
8. Building has amenity space available for residents use & which could serve as a social focal point for the building.	●	●	◒	●	●	●	●	●	●	◒	●	◒	●

- More residents at low crime buildings know one another; most or all would like greater neighbourliness. (CONDITIONS 2, 3 AND 5)

Recognition and familiarity among residents was low at two of four low crime buildings[1] and non-existent at seven of the eight crime prone buildings. At the three other buildings (two low crime and one crime prone) residents claimed they recognized and know most other residents. Among these buildings, two were senior citizens residences and the third was a functioning condominium. The only resident organizations among the sample group were operating at these three buildings.

- More residents at low crime buildings look after their neighbours' vacant apartment. (CONDITION 4)

More than half the respondents at three of four low crime buildings[2] had looked after a neighbour's apartment at least once. Among the crime prone buildings, a similar number of respondents had done so at only two of the three buildings.

House-sitting is typically a reciprocal arrangement among neighbours, but it could be formalized through the use of management or some other agent as a clearing house for the names of people interested in exchanging their services. Sometimes the "sitter" may reside in the dwelling at a reduced or waived rent for the service.

- Managers at all buildings recognize and know most residents.

The building manager (nearly always a resident, at least among the sample buildings) is chiefly responsible for nearly all operational aspects of the building on a day-to-day basis. Showing suites, sometimes leasing up and evicting residents, collecting rent, responding to service calls and tenant complaints, and maintaining the building in a safe, secure and attractive condition are all part of his responsibility. The manager spends more time in the building than most residents and has legitimate, non-social reasons to communicate with the residents.

With one exception (at a crime prone building), all managers claimed they recognized and knew most residents at their building. Furthermore, most respondents at nearly all buildings remarked favourably on the resident manager and how the person cared for the building.

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1. No resident opinion was available for one low crime building.

2. Ibid.

The nature of the manager's job and the continuing contact between resident and manager place the person in a pivotal role respecting crime prevention within a building. Given the support, training and knowledge, there is the potential for a building manager to:

- assume a more overt policing (surveillance) role at those times when the building is most vulnerable;
- inform residents of in-building crime conditions, and advise on/remind residents of what preventative measures they should be practicing given the building's design features;
- introduce those residents who are willing to assume neighbourly responsibilities, such as apartment sitting, floor watching, etc.; and
- inform the owner of in-building crime conditions and advise the owner of what preventative options should be tried at the building.

5.3.5 Proprietary Feelings and Behaviour Among Residents and Managers

The previous section acknowledged that the felt obligation of residents to each other was a key determinant of their willingness to assume intervention on reporting responsibility in the event of suspicious or criminal behaviour. Another key determinant of the willingness of residents and managers to acknowledge their role in crime prevention is the extent of their proprietary feelings, assumption of ownership and control over the building and neighbourhood they live in; a feeling of territoriality.

FIGURE 5.5 presents findings from questions asked of residents and managers to measure the proprietary feelings among the groups for their building, neighbourhood and neighbours. Conclusions drawn from the findings follow in the balance of this section.

- Residents and managers would work together to implement crime prevention programs for their building. (CONDITIONS 5, 6, 7, 9, 10, 11)

Earlier documentation noted that no resident-based crime prevention programs are presently operating at any of the sample buildings. However, responses to the independent questioning of residents and managers strongly suggest that:

- both parties accept that there is a joint responsibility for maintaining building security,
- residents would participate in programs to make the building more secure, and
- managers (excepting two in the crime prone group) would assume the responsibility to organize meetings to discuss security in the building.

FIGURE 5.5.1 : DESIGN & MANAGEMENT CONDITIONS

○ = No/None
◒ = To Some extent/<50%
◓ = To considerable extent/>50%
● = Yes/All

PROPRIETARY FEELINGS AMONG RESIDENTS AND MANAGERS

CONDITIONS	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B&E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	13	19	4	8	14	3	16	18	1	2
1. Residents will contribute to maintaining a tidy building and property.	◒	●		◒	◒	◒	◒	◓	○	◒	◒	◒	◒
2. Residents take rudimentary preventative measures such as questioning strangers and denying admittance to strangers	◒	◒		◒	●	◒	●	◒	◒	◒	◒	○	◒
3. Residents would report suspicious behaviour in the building outside any suite.	●	◒		●	◒	◒	●	◒	●	◒	●	●	●
4. Residents would report acts of vandalism observed or in progress.	●	◒		●	◒	◒	●	◒	●	◒	●	●	●
5. Residents would participate in programs to make the building more secure.	●	●		●	●	●	●	●	●	●	●	●	●

FIGURE 5.5.2 : DESIGN & MANAGEMENT CONDITIONS

○ = No/None
◒ = To Some extent/<50%
◓ = To considerable extent/>50%
● = Yes/All

PROPRIETARY FEELINGS AMONG RESIDENTS AND MANAGERS

CONDITIONS	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B&E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	13	19	4	8	14	3	16	18	1	2
6. Residents have good knowledge of crime prevention programs and information published by the police service	◒	◒		◒	◒	◒	●	●	◒	◒	◒	◒	◒
7. Managers believe most residents care about the building.	◒	●	●	◒	●	◒	●	◒	◒	◒	●	●	◒
8. Maintaining building security is accepted as a joint responsibility among manager and resident.	●	●	●	●	●	●	●	●	●	●	●	●	●
9. Management has policy for reporting criminal offences at building; and residents are aware of the policy.	◒	◒	◒	◒	◒	○	●	◒	○	◒	○	◒	◒
10. Manager would organize meeting(s) to discuss security in the building.	●	●		●	●	●	●	●	●	●	○	○	●

FIGURE 5.5.3: DESIGN & MANAGEMENT CONDITIONS

○ = No/None
◒ = To Some extent/<50%
◑ = To considerable extent/>50%
● = Yes/All

PROPRIETARY FEELINGS AMONG RESIDENTS AND MANAGERS

CONDITIONS	LOW INCIDENT /CRIME FREE GROUP					B & E PRONE GROUP			B&E & THEFT FROM VEHICLE PRONE GROUP			THEFT FROM VEHICLE PRONE GROUP	
	5	9	12	13	19	4	8	14	3	16	18	1	2
11. Manager is aware of common crime prevention program and information published by the police service.	◒	◒	◒	◒	◒	○	●	◒	◒	○	◒	◒	○
12. Management has requested the police service present specific programs at the building.	○	○	○	○	○	○	●	○	○	○	○	○	○
13. The police service has conducted a security inspection of the building at owner/ management request.	○	○	○	○	●	○	○	○	○	○	○	○	○

The survey findings also indicate that there are a number of problems which would have to be overcome as a prerequisite to translating such willingness into an action plan for any particular setting. Managers and (particularly) residents are largely unaware of what crimes are actually occurring in their building. With one exception[1], a security inspection has never been implemented at any building to identify vulnerable areas and possible solutions to increase management and residents' control of the building. Resident and (particularly) manager knowledge of the most common crime prevention programs and information is limited at both low crime and crime prone buildings. With one exception (a crime prone building), neither management nor the police have tried to correct the lack of knowledge through the introduction of specific education programs at the sample buildings.

Reporting procedures existed and were understood by most residents at four of five low crime environments. Among the eight crime prone environments, managers at three were unaware of any policy, and few residents at three of four other buildings were aware of managements' policy.

Studies of police response time in other communities suggest that many victims wait a considerable length of time before reporting a crime, thus ensuring a cold trail when police and/or management arrive. Many crime prevention programs include some form of training where citizens and/or managers are taught how to observe and report suspicious behaviour or criminal incidents.

- Residents will contribute to the control of access by strangers at legitimate entry/exit points to their building. (CONDITION 2)

The majority of resident respondents at all but one (crime prone) building indicated that they practiced these simple, preventative measures on a day-to-day basis. The residents' response coincides (with one exception) with the opinions expressed by managers in answer to the same questions about resident behaviour (see TABLE III.A, MANAGEMENT 6 AND 7). The reader should remember that previous documentation has noted a low level of familiarity among residents at most buildings.

- Residents pride in and commitment to upkeep of their surroundings decreases with distance from their suite. (CONDITIONS 1, 7)

Poor maintenance of public areas surrounding buildings, the building grounds and interiors suggest an indifference by residents and/or management to their surroundings, and are a cue to potential offenders from within and outside the area.

---

1. Purpose-built condominium operating as a condominium.

Among the sample buildings, most residents at all but two (crime prone) buildings said they would pick up strewn about papers from their hall, at the lobby, sometimes on outside grounds and rarely in the laneway behind the building. In the residents' opinion, it was the manager's responsibility for upkeep of outside grounds and laneway. With one exception, all managers said at least 80 percent of residents cared about their building, its appearance and general upkeep. Furthermore, managers acknowledged it was part of their jobs to ensure grounds outside and the lane were kept up.

At every sample building there were occasional examples of inattention to the presence of garbage, vandalism and broken fixtures. This was particularly noticeable at buildings which abutted a vacant parcel or commercial property. However, no building could be described as being noticeably shoddy or in an advanced state of disrepair. Unkempt conditions were usually found in the sheltered corners, nooks and crannies of windswept covered and open parking areas, narrow sideyards and in the lane.

6.0 RECOMMENDATIONS

6.1 FORMULATION OF RECOMMENDATIONS

This chapter is the summation of analysis and evaluation of selected high density residential buildings which were the subject of previous phases of this study. The purpose of this summary is to provide practical information to aid in the reduction of particular crimes addressed in the study - break and enter, theft from vehicles and vandalism of private property. The information takes the form of general guidance and particular strategies to strengthen prevention against these key crimes in the sample buildings and similar high density residential environments.

Specific findings from the case studies, supplemented by findings of others, were used to develop recommendations for the high rise residential building type, rather than for only the specific buildings in the study area. (The recommendations are valid for the buildings studied on a case-specific basis.) The focus on building type extends the usefulness of the recommendations beyond the study area.

A second underlying premise of this study is that effective crime prevention measures rely on acceptance of a shared responsibility for action, by the groups involved in the supply and consumption of housing, and policing services. A second premise is that a coordinated, multi-faceted program of strategies is more likely to achieve the goal of prevention than any particular individual tactic.

The following recommendations are written as responses to particular strengths and weaknesses found in these typical high density housing environments. Furthermore, the recommendations are especially organized to help each group recognize the possible scope of its actions and how such actions might interlock with the efforts of others to achieve the maximum benefit possible.

6.1.1 Process

The previous phases of this study have sought to understand the complex relationship between certain crimes and the nature of the places where they occur. The methods used examined the situation from several aspects; using statistics, on-site surveys, and the opinions of an offender, residents, managers, police and planners, to form a well-rounded crime-environment picture. The content of the surveys and documentation and analysis of conditions found at the sample buildings were organized around five variables thought to contribute to a potential criminal's success. Clearly, elimination or control of these variables is fundamental to organizing strategies for the reduction of the particular crimes of concern. Therefore, the following five broad directives are the focus of the strategies listed in this document.

a) Decrease the potential offender's opportunity for access and escape.

b) Increase the surveillance capability of the environment.

c) Increase the technical difficulty and risk of access to the environment.

d) Promote proprietary feelings and behaviour among residents and managers.

e) Strengthen the social organization of residents and managers.

Specific strategies cover issues at a range of scales (i.e. neighbourhood, site, building and suite) corresponding to the study analysis.

6.1.2 Organization of the Recommendations

The balance of this report is divided into six sections. The first five reflect the directives previously listed. For each of these, a short description of the subject is followed by a list of particularly vulnerable places (e.g. parking areas) which assumed importance as a result of the findings of the study. Specific opportunities available to the potential offender at such places are described briefly, followed by proposed strategies to curtail or reduce these opportunities. In some instances, the recommendations may be applicable to existing and yet-to-be-built projects. For others, a recommendation may not be feasible for one or the other situation. The sixth section presents broadly based recommendations to facilitate implementation of the listed strategies.

Recommendations are written for use by the specific groups participating in the provision and uptake of the housing product and policing of the residential area: residents, building managers and owners, designers/planners and policing services. The format provides each group with courses of action relative to specific problems. It also illustrates that there is an inter-relationship among the responsibilities of each interest group, and that the strength of crime prevention strategies rests with a collective set of actions initiated by the many parties concerned.

Throughout the document, courses of action recommended for a particular directive and place may be reiterated for another directive and/or place. These overlaps indicate that one course of action may be effective for several problems. They also illustrate the interrelationship among opportunities for crime and, hence, emphasize the need for interrelated courses of action.

Because the recommendations presented are grouped by directive rather than setting, the following table may be used as a cross reference for place-specific recommendations.

TABLE 6.1
SETTING-SPECIFIC INFORMATION

DIRECTIVE / PLACE	Access & Escape	Surveillance Capability	Technical Difficulty & Risk	Proprietary Feelings & Behaviour	Social Organization
Neighbourhood	page 112	page 120	page 128	page 137	page 140
Parking Areas	page 112	page 121	page 129	*	*
Building	page 114	page 122	page 131	*	*
Amenity Areas	page 116	page 124	page 133	*	*
Suite	page 118	page 126	page 135	*	*

* - Discussed in Building

The main purpose of high density housing is to provide an adequate, alternative form of shelter for people who prefer it or must accept it as their only choice. The purpose of the recommendations herein is to reduce the opportunity for successful commission of particular crimes in high density housing. The prevention of crime is only one of many functional considerations related to the design and supply of livable, marketable housing. It would be inappropriate to consider the recommendations made in this document outside of the context of commonly accepted features and practices which satisfy residents' daily living requirements.

6.2 RECOMMENDATIONS

6.2.1 Decrease the Potential Offender's Opportunity for Access and Escape

The ease with which an illegitimate user can penetrate an environment, and escape if he does manage to gain entrance, is an important factor in the decision to commit a crime. Potential offenders are attracted to neighbourhoods, buildings and suites that are easily accessible and where they can remain anonymous throughout the duration of the attack. Reducing the amount of time spent in the area also decreases the would-be offender's chances of being noticed and apprehended by a resident or police authority.

The illegitimate user should be denied easy access to and escape from:

- the neighbourhood,
- parking areas,
- the building,
- shared amenity areas within and associated with the building, and
- individual suites.

a) The Neighbourhood

To commit a crime the potential offender must first gain entry into the neighbourhood. Therefore, ease of access by potential offenders to the neighbourhood should be minimized.

Neighbourhood access is difficult to control, particularly in mixed use districts like the study area, where there are numerous legitimate, non-resident users. This is further complicated by the number of non-residents using this area for parking because of its proximity to downtown and commercial services along the boundary roadways.

Recommendations:

Residents, Owners, Managers	1.	Observe suspicious behaviour and potentially illegitimate users in the neighbourhood.
	2.	Report observations to local authorities, or nearby businesses or building managers.
Designers/ Planners	1.	Provide circulation controls such as real or symbolic barriers, to discourge illegitimate vehicular and pedestrian traffic.
Police Services	1.	Investigate use of foot patrols to increase police presence on the street.
	2.	Develop materials and techniques to teach residents how to recognize specific situations in their area which promote opportunity for illegal access and escape.

b) The Parking Areas

Theft from vehicles is often a major concern, as it was in this particular area. In addition, the entrances between parking areas and buildings are frequently used as access points for the offender. Both these indicate that access to parking areas by illegitimate users should be minimized.

Theft from vehicle reports indicate that these offenses usually occur in the late afternoon and evening when the residents are home and presumably have parked their vehicles in designated spaces. Sound and photo equipment are most frequently stolen. The incidence of these crimes has increased in the study area in recent years.

Most of the parking associated with the buildings studied was located in structured parking garages. Parking information was gathered mainly on these facilities, although some of the recommendations also are valid for surface and street parking.

In the low crime buildings surveyed, most had controlled access to specific access/egress points in their structured parking areas. Further, these points were located on the public or street sides of the buildings. Only one building did not provide direct access from parking areas to residential floors.

Unrestricted and hidden access to parking areas and hence to the building increases the attractiveness of these areas to potential offenders.

Recommendations:

Residents

1. Ensure that vehicles are locked and valuables are either removed from or stowed in the trunk of vehicles left in parking areas.

2. Be aware of individuals you don't recognize or suspicious behaviour in parking areas. Report suspicious behaviour and individuals to the building manager.

3. Report evidence of damage done to residents' private property or to devices meant to secure the parking area (e.g. chain link screening) to the building manager.

4. Ensure that other vehicles or individuals do not follow you into controlled access parking areas.

5. Assure yourself that you are familiar with people entering the building with you through parking entrances.

6. Ensure that access to parking areas and access between parking areas and the building are not left open and unattended

Owners/ Managers

1. Inspect entrances to parking areas on a regular basis. Ensure that hardware and operating mechanisms are maintained and functioning properly.

2. Be aware of individuals you don't recognize or suspicious behaviour in parking areas.

3. Ensure that entrance/exit doors to parking areas are closed, and not left open and unattended.

Designers/ Planners

1. Restrict public access to uncontrolled parking facilities to specific, easily identified access/egress points. Surface parking should have defined entrances/exits that limit the ability to "drive through" or "short cut" through the parking area.

2. If possible, provide access to uncontrolled parking from the street or public side of the building. Access from laneways or adjacent lots are usually more difficult to observe and, hence, provide unobtrusive access to the potential offender.

3. Provide electronically controlled access doors to restricted parking areas, with entrances visible from the public side of the building.

4. Minimize the possibility of direct access from parking areas to residential floors. If possible, parking areas should be connected directly to a public area in the building, such as the lobby, to minimize unobtrusive access.

5. Specify first rate quality hardware (sturdy and difficult to duplicate) on parking access/egress points to control access.

Police Services

1. As part of routine patrols, visually inspect visible and open parking areas.

2. Conduct random patrols of accessible parking areas and test the secured access points from these areas to the buildings. Advise building managers to repair deficiencies to control illegal access and escape.

3. Inform vehicle owners and/or building managers of vulnerable situations, such as unlocked vehicles and visibility of valuables inside vehicles.

c) The Building

Break and enter and vandalism were identified as important crimes to reduce because of the volume of offenses in the study area. To commit these crimes within a building, ease of access is a significant feature. Therefore, access to the building by would-be offenders should be controlled.

Main entrances, intercom call boards, fire exits, other convenient entrances and parking area entrances are potentially vulnerable access points. Their vulnerability is increased by factors such as poor visibility from public areas, inadequate maintenance and ineffective controls. Crimes may be reduced if offenders can be made to perceive these areas as undesirable or difficult access points.

Of the buildings sampled, the low crime ones tended to have greater control over building entrances. Features observed included a fewer number of remote entrances and fewer lower floor suites with exterior access points than found in the crime prone buildings. Managers at the low crime buildings also maintained greater control over access by service personnel and use of entrance/exit doors (i.e. leaving doors open and unattended was not considered to be a problem). Routine inspection of entrance hardware was carried out in the majority of buildings.

Access through parking areas is addressed in Access to Parking Areas.

Recommendations:

Residents

1. Assure yourself that you are familiar with people entering the building with you.
2. Ensure that entrances/exits to the building are not allowed to remain open and unattended.
3. Maintain your building's security by reporting any malfunctioning or missing hardware used to control building entrances to the building manager.
4. Establish the identity of persons ringing your suite on the intercom before admitting them.

Managers/ Owners

1. Provide a full-time management system (e.g. resident manager) for daily control of the building and to respond to tenant queries (e.g. problems in suites) and reports (e.g. missing hardware).
2. Inspect hardware at all entrances on a daily basis. Schedule, implement and follow-up on repair of damaged hardware.
3. Escort service personnel throughout the building.
4. Ensure, through regular inspection, that entrance doors are not left open and unattended.

5. If the situation warrants such action, provide security personnel (temporary or permanent, as required) to screen people entering the building through the main entrance and/or patrol entrances to the building.

6. Encourage residents to assist you in maintaining building security by asking them to report suspicious behaviours and individuals, and missing or damaged hardware at building entrances.

Designers/ Planners

1. Provide a minimum number of uncontrolled entrances to the building. Each entrance should be visible from a public area inside or outside the building.

2. Ensure that entrances to the building do not permit direct circulation to residential areas. These entrances should be located near public use areas, such as the lobby.

3. Provide an intercom system that does not identify residents' suite numbers so that potential offenders cannot readily identify unoccupied suites.

Police Services

1. Visually inspect major building entrances as part of routine neighbourhood patrols.

2. Conduct random tests on building entrances to check security measures. Inform building managers of the adequacy of these entrances from a security point of view.

d) The Shared Amenity Spaces Within and Associated with the Building

Shared areas provided for resident comfort and convenience were found to be frequent targets for vandalism and were also used as places for criminals to hide. Therefore, ease of access to these areas by illegitimate users should be minimized.

Garbage collection/storage rooms, laundry rooms, landscaped decks and other amenity areas comprise amenity spaces in high rise living. Some control measures should exist to reduce the threat of criminal activity and to enhance the appearance of these areas as positive features of the building.

The low crime buildings surveyed featured key lockable or controlled exterior access to amenity areas (e.g. garbage collection rooms and decks), and supervised access of service personnel.

Recommendations:

Residents	1.	Assure yourself of the identity of people using amenity areas within or associated with the building.
	2.	Report any suspicious behaviour and individuals in these areas to the building manager.
Managers/ Owners	1.	Inspect amenity areas on a regular basis. Schedule, implement and follow-up on repair or replacement of any damaged hardware on key lockable entrances.
	2.	Supervise or control access by outside service personnel requiring entrance to these areas.
	3.	If the situation warrants such action, control or restrict access to these areas during hours of non-use. For example, exterior access to garbage storage could be locked on non-collection days.
Designers/ Planners	1.	Control exterior access to garbage collection areas within the building. For example, provide lockable exterior and interior doors or a system that does not permit entrance (e.g. garbage chute). Alternatively, provide exterior garbage storage.
	2.	Minimize or eliminate exterior access to areas within the building that do not require entrances/exits to outdoors to control illegitimate access.
	3.	Locate interior amenity areas near other public use areas in the building, such as lobbies and circulation areas, to enhance detection of criminal activity and encourage social activity.
	4.	Minimize exterior public access to areas associated with, but not within the building (e.g. decks). Access should permit legitimate users but restrict illegitimate ones. This may be achieved by key access.
	5.	Provide lockable amenity areas or areas capable of being locked, if necessary, to control access.
Police Services	1.	Inspect visible exterior and interior amenity areas as part of routine neighbourhood patrols.

e) The Individual Suites

For the individual, invasion of his territory and theft of personal belongings can constitute a real threat as well as a personal loss. More control of illegitimate access to a suite may help to allay both these concerns.

Analysis of break and enter reports indicated that vandalism or damage to suites was not prevalent. However, victims experienced great personal loss and felt they had limited control over their environment. Most items stolen were small and portable, cash and jewellery being the most frequently cited.

Illegal access to suites is mainly through the front entry or balcony. The majority of illegal entries were by direct walk-in (suite unlocked), by use of a pass key or by prying the door frame. In most cases the resident was away or asleep at home, minimizing the offender's chance of discovery.

Survey results revealed that lower floors, specifically ground and second floor suites, were difficult to rent. This could possibly be attributed to their vulnerability to outside access. Linked balconies, providing suite to suite access, were more prevalent in the crime prone buildings surveyed.

Recommendations:

Residents

1. Ensure that suite doors and windows are locked whenever the suite is vacant.

2. Store valuables, particularly small and portable ones, or large amounts of cash in a secure location (e.g. safe) in your suite or in a secure place not in your suite.

3. Request that key locks be rekeyed or replaced when occupying a new suite. Ensure that you know how many keys there are to your suite, who has them and where they are. Ensure that keys loaned to friends are returned.

4. Request that additional hardware or access control mechanisms be installed on doors and windows if the current ones are inadequate or do not exist.

Managers/ Owners

1. Rekey or change locks to suites for new tenants. Inform tenants of this procedure to reassure them of this security measure.

2. Inspect corridors and exterior accesses to suites on a regulr basis, noting suites that are left open and unoccupied. Inform tenants of these observations and their responsibility to other residents in the building.

3. Install or permit the installation of additional locks to suite doors and windows if tenants feel they require additional security.

Designers/ Planners

1. Minimize exterior access to ground and second floor suites. This may be accomplished by not locating suites on these lower levels and/or by not providing exterior access from suites on lower levels, or by providing stringent access control (e.g. screened/enclosed amenity areas) to these suites.

2. Minimize exterior access to suites from balconies. If possible, do not provide linked balconies. Where connecting balconies exist, control access between balconies by using screening or other barriers. It should be possible to firmly secure all doors and windows to balconies.

3. Specify adequate high security locks for suite entrances, including balconies, and windows to deter illegitimate access.

Police Services

1. Inspect visible exterior access points to individual suites as part of routine neighbourhood patrols.

6.2.2 Increase the Surveillance Capability Within the Environment

The success of a potential criminal (and loss to the victim) is considerably reduced if he is noticed during the commission of the crime and apprehended thereafter. The risk of detection is increased by both informal (e.g. casual observation) and formal (e.g. scheduled security patrols) surveillance activity.

Data accumulated in this study revealed the presence of several design features which facilitated surveillance in the low crime buildings surveyed. Effective management features were uniformly present or absent in all buildings, indicating that these features are most likely effective when used in conjunction with other control strategies.

Better surveillance capability at:

- the neighbourhood,
- parking areas,
- the building,
- shared amenity areas within and associated with the building, and

- the individual suites

makes it easier to observe illegal behaviour (the potential criminal can be seen) and perceptional (the potential criminal thinks he may be seen) visibility; surveillance capability may be enhanced.

a) The Neighbourhood

The ability of a potential criminal to remain unnoticed in a neighbourhood increases the probability that a crime may be successfully committed. To make the potential offender more visible, the surveillance capability of the neighbourhood should be increased.

In mixed use areas, the number of non-resident users make it difficult to distinguish people in the neighbourhood for legitimate purposes from those that are there for illegitimate purposes. This may be further complicated by poorly defined activity zones and territories, and inadequate and inappropriate separation of uses.

Lack of control over surroundings, inadequate buffering from other uses and residents' feelings of insecurity in the neighbourhood characterised the study area. Providing distinct territories and good visibility within and between different activity areas addresses these concerns by enhancing the individual's ability to observe illicit behaviour and feel secure.

Recommendations:

Residents	See Recommendations for Access to Neighbourhood.
Managers/ Owners	See Recommendations for Access to Neighbourhood.
Designers/ Planners	1. Provide distinct activity zones within a neighbourhood that define different areas of use. Distinguishing features may include barriers, landmarks, signage and landscaping.
	2. Provide boundaries between activity areas that permit some visibility between these areas while maintaining acoustical and physical separation.
Police Services	1. Investigate use of foot patrols to increase formal surveillance on the street.
	2. Increase positive profile with local merchants, building managers and others who are routinely in the area.
	3. Develop materials and techniques to teach residents what to assume from certain observations in their area, and what they should do based on their observations.

b) The Parking Areas

Parking areas provided for resident convenience can be targets for theft from vehicles, and can serve as illegitimate access points to the building. Theft may be reduced and illegitimate access may be better controlled by increasing visibility in these areas.

Features characteristic to the low crime buildings studied included good uniform lighting in both covered and uncovered parking areas. In addition to increasing the opportunities for surveillance, some residents felt that the presence of adequate lighting contributed to their confidence in using these areas, decreasing their fears. Uniform lighting of ceiling and wall surfaces in enclosed parking structures in the low crime buildings also enhanced visibility.

Another characteristic of the low crime buildings was the visibility from the public side (i.e. street or lane) of the building to the entrance doors. This type of visibility encourges informal surveillance.

Visibility between the parking areas and the building (e.g. glazing at connecting doors) would promote surveillance from a "safe" position. Although this feature was not demonstrated in any of the buildings surveyed, it should be considered as a possible deterrent to crime.

Recommendations:

Residents

1. Be aware of individuals you don't recognize or suspicious behaviour in parking areas. Report suspicious behaviour and individuals to the building manager.

2. Be aware of broken and non-functioning lighting fixtures in the parking areas. Report these to the building manager. Good lighting provides a measure of security, increasing visibility.

3. Note areas in the parking lots that are difficult to see into (e.g. heavily shadowed and/or dark), and request that lighting be placed in these areas to increase visibility and provide a measure of security.

Managers/ Owners

1. Be aware of individuals you don't recognize or suspicious behaviour in parking areas.

2. Inspect lighting to and within parking areas on a regular basis. Schedule, implement and follow-up on repair and replacement of lighting fixtures.

3. Note areas in the parking lots that are difficult to see into (e.g. heavily shadowed and/or dark), and provide uniform lighting in these areas.

4. Encourage residents to assist you in maintaining building security by asking them to report suspicious behaviour and individuals, and missing or damaged lighting in parking areas.

Designers/ Planners

1. In all parking areas provide uniform and adequate lighting that:

   - minimizes shadows, blind spots and dark areas that may be used as hiding places;
   - illuminates parking stalls and wall and ceiling surfaces;
   - is easy to maintain to minimize replacement and maintenance costs;
   - is of sufficient height or has sufficient protection to guard against damage by high vehicles; and
   - is of appropriate intensity and color to meet the above criteria, yet is not an annoyance to those occupying nearby suites.

2. Specify wall and ceiling colors to be light reflective to enhance visibility and minimize shadows and dark areas.

3. Provide public visibility to the exterior entrances to parking areas to enhance informal surveillance by residents and passersby.

4. Provide visibility between the building, preferably a public area, and the parking areas.

Police Services

1. Inspect visible structured and open parking areas as part of routine neighbourhood patrols.

c) The Building

Any entrance to a building provides a potential access point for a would-be offender. Good visibility to and from entrances decreases their attractiveness to the criminal by increasing the possibility of his detection.

In the low crime buildings surveyed, visibility of the main entry was characterised by visibility between interior public areas, such as the lobby and elevator waiting area, and the street and vice versa. This feature enhances surveillance from inside and outside the building.

Good outdoor lighting at all entrances/exits was another feature of the low crime buildings. This included paths to and from the building, lane access areas and yards.

The visibility of emergency exits from outside the building, and to clearly marked signs (indicating the building's address) from the street or lane are positive features not unique to either the low crime or crime prone buildings sampled.

Recommendations:

Residents

1. Maintain building security by reporting broken and non-functioning lighting fixtures at building entrances to the building manager.

2. Observe suspicious behaviour and individuals near building entrances and report these observations to the building manager.

3. Use emergency exits only in emergencies so that they do not become regular access points for residents, and perhaps afford access to a potential offender.

Managers/ Owners

1. Ensure that lighting in and near building entrances and exits is properly maintained and in good working order.

2. Install additional lighting in and near building entrances and exits if the existing lighting is inadequate, or creates dark or shadowed areas that may be used as hiding places.

3. Observe suspicious behaviour and individuals near building entrances.

4. Ensure that exterior signs at the building are well lit and unambiguous (i.e. explicitly defined access points) so that people approaching the building can readily identify the address and are visible.

5. Encourage residents to assist you in maintaining building security by asking them to report suspicious behaviours and individuals, and missing or damaged lighting at building entrances.

Designers/ Planners	1.	Provide good outdoor and indoor lighting at all entrances to and exits from the building, minimizing dark and shadowed areas. Lighting should provide uniform visibility.
	2.	Provide lighting to outdoor accesses, such as pathways, yards and lanes, to increase the visibility of the approaches to the building. All lighting should be easy to maintain, yet difficult to vandalize.
	3.	Provide visibility between public use areas in the building and the street or lane through a major entrance area to enhance observation by residents and passersby.
	4.	Clearly sign the building address from public approaches to the building to assist identification by legitimate visitors.
	5.	Provide visibility from entrance points to interior corridors and hallways, avoiding hard to see recessed areas and other potential hiding places.
Police Services	1.	Visually inspect major building entrances as part of routine neighbourhood patrols.

d) The Shared Amenity Spaces Within and Associated with the Building

In high rise buildings, shared spaces may provide potential offenders with access to individual suites (e.g. a landscaped roof deck) and may be targets for vandalism. The ability to survey these areas as part of normal routine would discourage these illegal activities.

Low crime buildings surveyed exhibited the following features: visibility between shared spaces and exterior public areas, visibility of major entry areas and elevators from occupied control spaces, visibility of amenity areas from adjacent interior or exterior circulation, and good lighting to landscaped roof decks.

Shared amenity areas were found to be susceptible to vandalism and theft. These areas, if not properly maintained, may be subject to further abuse because of a "don't care" attitude. This may result in lack of use (perception of the area as undesirable and not an amenity) or closure of the area. Circulation routes within the building (i.e. stairwells and corridors) generally were well lit, with wall finishes of light, reflective colors in the majority of buildings sampled. At none of the buildings surveyed was it possible to see between stairwells and corridors, although this characteristic is considered to be an effective surveillance measure.

Recommendations:

Residents

1. Help maintain security by reporting any suspicious behaviours and individuals, both residents and non-residents, in the shared amenity areas to the building manager. Report observations prior to entering the area, or avoid the area if you are not comfortable with the situation.

2. Report any malfunctioning or broken lighting fixtures in amenity areas to the building manager.

Managers/ Owners

1. Inspect amenity areas on a regular basis. Schedule, implement and follow-up on repair or replacement of broken light fixtures.

2. Ensure that amenity areas are properly maintained to encourage appropriate use. Familiarize residents with use of equipment and schedules of use.

3. Maintain visual contact to public spaces visible from your office when working there.

4. Accompany service personnel working in these areas.

5. If the situation warrants such action, establish hours of access for amenity spaces, locking spaces when not in use or after hours of use.

6. Encourage residents to assist you in maintaining building security by asking them to report suspicious behaviours and individuals, and missing or damaged lighting in amenity areas.

Designers/ Planners

1. Increase surveillance potential by providing visual access between shared spaces within and associated with the building, and exterior public areas and interior circulation areas.

2. If possible, locate management offices near and visible to the main entrances and associated spaces (e.g. lobbies, mailboxes) so that resident managers may informally screen activities in these areas.

3. Provide good uniform lighting in and to amenity areas and circulation routes with walls of light, reflective colors. Lighting should be easy to maintain, yet difficult to vandalize.

4. Locate amenity spaces near or adjacent to interior and/or exterior circulation with some visual access between these areas to encourage use and increase surveillance.

5. Provide some visual connection between circulation routes within the building so that individuals may "see ahead". Recessed areas and "nooks and crannies" should be well lit or avoided, if possible.

6. Specify low maintenance, durable materials in high traffic and shared amenity areas to reduce vandalism and maintenance costs.

7. If possible, provide the capability for locking amenity spaces when not in use.

Police Services

1. Visually inspect exterior and visible interior amenity areas as part of routine neighbourhood patrols.

e) The Individual Suites

Residents often feel they lack control over their surroundings. Increasing their ability to survey their surroundings may help to reduce this feeling, as well as minimize the possibility of break-in and theft.

Illegal entry to individual suites was found to be mainly through the front door or the balcony. Analysis of break and enter reports indicates that residents were usually away or asleep when the offenses occurred. These instances reflect times of minimal surveillance.

Wide angle viewing devices on suite entry doors were features predominant in the low crime buildings surveyed. Good lighting throughout the building was characteristic to the entire sample.

Recommendations:

Residents

1. To provide additional security, use the viewing device at suite entry door to identify visitors prior to admitting them to your suite. If not already provided, request that the device be installed or request permission to install one yourself.

2. Report any broken or malfunctioning lighting fixtures on routes in the building to your apartment to the building manager.

3. Use timed lighting devices or have a neighbour check your apartment if you plan to leave your suite unoccupied for a prolonged period of time. The presence of activity is often a deterrent to a potential criminal.

4. Inform the building manager of your absence from your suite for prolonged periods of time and of any plans you have made to have others "sit" your suite. This may ensure that legitimate surveillance can occur while you are absent.

5. Install photosensitive lights in individually controlled balcony areas to provide illumination and increase visibility at night. Automatic controls eliminate the need to remember to turn lights on daily.

Managers/ Owners

1. Inspect lighting in corridors outside of suites on a regular basis. Schedule, implement and follow-up on repair or replacement of lighting fixtures.

2. Permit the installation of wide angle viewing devices on suite doors.

3. Encourage residents to assist you in maintaining building security by asking them to report missing or damaged lighting within the building.

Designers/ Planners

1. Provide wide angle viewing devices on suite doors so that residents may identify callers prior to admitting them.

2. Provide good uniform lighting in corridors outside of suites that permit visibility to and from each suite. Residents should be able to have a clear view of their paths to and from major access and circulation routes.

3. Provide balcony lighting with uniform illumination controlled individually in each suite, or centrally by the building manager.

Police Services

1. Visually inspect exterior access points to individual suites as part of routine neighbourhood patrols.

6.2.3 Increase the Technical Difficulty and Risk of Access to the Environment

Some physical measures effective in deterring crime rely on presenting technically difficult access situations. Many potential criminals may not have sufficient skills and hardware, particularly unobtrusive tools that can be hidden on themselves, to gain access. In addition, the time involved in overcoming these measures may make the target undesirable because of the risk of detection during the attack.

These target hardening techniques include measures such as improved quality of door and window frames, adequate hinges, increased number of and better quality locks, solid doors and strengthened glazing. Other techniques, such as alarms and surveillance cameras, also increase the risk of detection of illegal activities. Technical difficulty and risk of access may be increased in:

- the neighbourhood,
- parking areas,
- the building,
- shared amenity spaces within and associated with the building, and
- the individual suites

with use of the following guidelines.

a) The Neighbourhood

A neighbourhood may be perceived as being vulnerable to criminal acts if a significant number of buildings in the area are known to be easy hits by potential criminals. Therefore, technical difficulty and risk of access to buildings in the neighbourhood should be increased.

Mixed use areas like the study area consist of a variety of building types and activities. Since these do not present a common set of purposes, it is difficult to establish a shared feeling of responsibility. In order to present a united image with regard to crime prevention, there must be consistent attitudes and actions. This may be created through participation in awareness and action programs.

Recommendations:

Police Services	1. Develop materials and techniques to inform residents of measures that increase technical difficulty and risk for the would-be offender in their area.

2. Develop and actively promote use of appropriate neighbourhood security programs.

3. Develop and actively promote use of building inspection programs.

b) The Parking Areas

Parking areas associated with high rise buildings can be vulnerable targets for theft from vehicles and can serve as entry points for illegitimate access to the building. Increasing the technical difficulty and risk of access to these areas decreases their attractiveness to the potential offender.

The presence of any type of controlled access system to a parking area provides a certain measure of security in itself. This is enhanced if the system is difficult to duplicate. The encoded card system with changeable codes is regarded as most secure. Most of the buildings studied had key activated systems which could be duplicated with ease.

In the low crime buildings sampled, most entrances/exits had lock mechanisms covered by protective steel plates which prohibit tampering with the mechanism.

None of the buildings surveyed utilized surveillance cameras. This measure may act as a deterrent, but may also promote the idea that the risk to residents is far greater than the facts warrant. Residents may become fearful for no good reason.

Recommendations:

Residents

1. Ensure that you are using the existing hardware properly. For instance, by checking to see that doors are not propped open, you are helping to maintain security for yourself and your neighbour.

2. Promote security by reporting any damaged or malfunctioning hardware to the building manager.

3. Report lost keys to the building manager. Ask the building manager for duplicate keys if you require another. To enhance security arrangements, the manager should have control over the distribution of keys and should keep a record of this distribution.

4. On occasion, it may be necessary to lend keys to friends. For example, keys may be lent to visitors staying with you or someone "sitting" your suite. To reduce the possibility of loss or duplication, ensure that these keys are returned to you.

Managers/ Owners

1. Inspect locking devices and control mechanisms to parking areas on a regular basis. Schedule, implement and follow-up on repair or replacement of damaged or malfunctioning devices and mechanisms.

2. Keep a record of the number and whereabouts of access keys and cards to assist in the control of the use of parking areas.

3. Replace or rekey operating system access keys if a significant number of keys have been lost or duplicated.

4. Provide key duplication services for residents who require another key due to key loss or for other legitimate users. Keep a record of these duplications.

5. Accompany service personnel requiring access to parking areas rather than providing them with access keys or cards.

6. Revise codes regularly if parking access is controlled by encoded cards to minimize the possibility of illegitimate users obtaining codes.

7. Encourage residents to assist you in maintaining building security by asking them to report missing or damaged hardware in the parking areas.

Designers/ Planners

1. Provide superior (difficult to duplicate) controlled access system to parking areas. (For example, consider use of systems easy to recode or rekey.)

2. Provide astragal covers (protective steel plates) to locks on access doors between parking areas and the building to deter potential offenders from tampering with doors and locks.

3. If the severity of the problem warrants it, investigate use of surveillance cameras with a secured monitoring area within the building. This recommendation may entail the need for additional personnel.

4. Specify easy to maintain, durable materials in parking areas that decrease vulnerability to vandalism.

5. Provide easy to maintain, and if necessary protected, lighting. This recommendation increases the difficulty and risk associated with vandalism and enhances surveillance capability.

Police Services

1. Assist in the review of design specifications for the structural integrity of access points and access hardware.

2. Conduct random patrols of accessible parking areas, and test the secured access points from these areas to the buildings. Advise building managers of technical measures they may use to increase security in these areas.

c) The Building

The main entrance and the use of the intercom call board can be major primary targets for illegitimate access to a building. Increasing the difficulty and risk of access through these and other entry points provides a measure of security for the building.

The low crime buildings studied exhibited two security features not generally found in the crime prone buildings. Astragal plates were present on almost all entrances/exits, the main entry door and fire exits. Also, the intercom call board did not display resident information (i.e. sex, suite number and location in the building). This latter feature can be effective in deterring potential criminals as it provides little information for assessing possible targets and victims.

Master key systems that are not easily duplicated were in use at only some of the low crime buildings.

Recommendations:

Residents

1. Ensure that you are using the existing hardware properly. For instance, by checking to see that doors are not propped open, you are helping to maintain security.

2. Maintain building security by reporting any damaged or malfunctioning hardware to the building manager.

3. Identify visitors ringing your suite through the intercom prior to admitting them to the building.

4. On occasion, it may be necessary to lend keys to friends. For example, keys may be loaned to visitors staying with you or someone "sitting" your suite. To reduce the possibility of loss or duplication, ensure that these keys are returned to you.

Managers/ Owners

1. Inspect protection devices, hardware and doors on all access/egress points on a regular basis. Schedule, implement and follow-up on repair or replacement.

2. Keep a record of the number of entrance keys issued to residents to help control use of these entrances.

3. Provide key duplication services for residents who require another key due to key loss or for other legitimate users. Keep a record of these duplications.

4. Ensure that you maintain control of the master key to avoid its duplication or misuse. This key(s) should be kept in a secure place when not in use. Individuals requiring use of this key should use it only in your presence.

5. Admit and/or accompany service personnel requiring access to the building rather than providing them with entrance keys.

6. Encourage residents to assist you in maintaining building security by asking them to report missing or damaged hardware at building entrances.

Designers/ Planners

1. Recommend useful security measures, such as providing astragal cover plates to locksets on all exterior access/egress points.

2. Provide an intercom system that does not provide resident suite information. This type of system gives the potential offender little information about location of unoccupied suites, making the identification of possible targets more difficult.

3. Utilize a difficult to duplicate master key system, one that may be easy to recode or rekey.

4. Specify easy to maintain, durable materials in parking areas that decrease vulnerability to vandalism.

5. Provide easy to maintain and, if necessary, protected lighting. This recommendation increases the difficulty and risk associated with vandalism and enhances surveillance capability.

Police Services

1. Assist in the review of design specifications for the structural integrity of access points to and access hardware on entrances.

2. Conduct random checks on building entrances to test security measures. Inform building managers of the technical adequacy of these entrances.

d) The Shared Amenity Spaces Within and Associated with the Building

Effective shared amenity spaces should be desirable areas for residents to use. Minimizing their appeal to the potential offender as targets and/or hiding places may be achieved by increasing the technical difficulty and risk of access to these areas.

Among the buildings studied, low crime buildings exhibited forms of protection against illegal access through landscaped deck areas. In addition, these buildings tended to have fewer suites located at ground and deck levels. Other features prevalent in low crime buildings were key controlled access to shared laundry facilities and garbage storage/collection rooms. Such control is effective in restricting illegitimate access if residents share responsibility for proper use of these areas. Key controlled access to resident storage areas and amenity rooms were features found throughout the sample buildings.

All the above permit legitimate resident access. However, they do not prevent resident abuse of these areas. Residents and management must both assume responsibility for the care of these areas.

Recommendations:

Residents

1. Use amenity spaces properly to encourage appropriate use by others. To protect your property ensure that your possessions are not left unattended in these areas unless the space is for your use only (e.g. dedicated storage areas).

2. Ensure that amenity spaces are properly locked when leaving. Familiarize yourself with others using the area to assist in the identification of illegitimate users.

3. Report suspicious activities in these areas to the building manager prior to entering these spaces.

4. Ensure that you are using the existing hardware properly. For instance, by checking to see that doors are not propped open, you are helping to maintain security.

5. Maintain security by reporting any damaged or malfunctioning hardware to the building manager.

6. Report lost keys to the manager, who should control distribution of keys and supply duplicate ones.

Managers/ Owners

1. Inspect protection devices, hardware and doors on all access/egress points on a regular basis. Schedule, implement and follow-up on repair or replacement.

2. Keep a record of the number of keys to each space issued to residents to help control use of these spaces.

3. Provide key duplication services for residents who require another key due to key loss or for other legitimate users. Keep a record of these duplications.

4. Admit and/or accompany service personnel requiring access to amenity spaces rather than providing them with keys.

5. Ensure that amenity areas are properly maintained to encourage appropriate use. Familiarize residents with use of equipment and schedules of use.

6. If the situation warrants such action, establish hours of access to amenity spaces, locking spaces when not in use or after hours of use.

Designers/ Planners

1. Provide protection devices, preferably key controlled, on access/egress points to all shared amenity spaces.

2. Specify easy to maintain, durable materials in shared amenity spaces to reduce or deter vandalism.

Police Services

1. Assist in the review of design specifications for the structural integrity of access points to and access hardware on amenity spaces.

e) The Individual Suites

One method of enhancing resident control over their immediate surroundings is to increase the technical difficulty and risk of access to their individual suites.

In the low crime buildings studied, all exterior access points at ground and other vulnerable levels were protected by either key locks or other devices. Balconies were not protected at other levels in all buildings studied.

Low crime buildings generally were found to have sufficient lockset hardware (1" deadbolt locks) placed on suite doors. In addition, door frames were structurally sound, i.e. twisting and spreading of the frames was not possible. Management policies regarding the installation of additional locks varied although, when permitted, some residents did install more locks. Suite locksets were changed with tenancy in the low crime and some of the crime prone buildings studied.

Data analysis indicated that illegal entry to suites was mainly through the suite door (walk-in, pass key or prying the door frame) or through the balcony. Target hardening can be an effective deterrent, but residents must also demonstrate care in using these measures.

Recommendations:

Residents

1. Ensure that you are using the existing hardware properly. For instance, by checking to see that doors are not propped open, you are helping to maintain security.

2. Maintain security by reporting any damaged or malfunctioning hardware to the building manager.

3. Report lost keys to the building manager. Ask the building manager for duplicate keys if you require another. To enhance security arrangements, the manager should have control over the distribution of keys and should keep a record of this distribution.

4. On occasion, it may be necessary to lend keys to friends. For example, keys may be lent to visitors staying with you or someone "sitting" your suite. To reduce the possibility of loss or duplication, ensure that these keys are returned to you.

5. Ensure that suite doors and windows are locked whenever the suite is vacant.

6. Request that key locks be rekeyed or replaced when occupying a new suite. Ensure that you know how many keys there are to your suite, who has them and where they are.

7. Request that additional hardware on access control mechanisms be installed on doors or windows if the current ones are inadequate or do not exist.

Managers/ Owners

1. Rekey or change locks to suites for new tenants. Inform tenants of this procedure to reassure them of this security measure.

2. Install or permit the installation of additional locks to suite doors and windows if tenants feel they require additional security.

3. Schedule, implement and follow-up on the replacement or repair of damaged and malfunctioning hardware on suite access points.

4. Encourage residents to assist you in maintaining building security by asking them to report missing or damaged access hardware in and to their suites.

Designers/

1. Provide locks on all suite doors and protection devices/locks on balcony and other access/egress points in each suite. Ensure that these devices and their frames are of sufficient integrity to resist entry through tampering, twisting, etc.

Police Services

1. Assist in the review of design specifications for the structural integrity of access points to access hardware on individual suites.

6.2.4 Promote Proprietary Feelings and Behaviour Amongst Residents and Managers

Proprietary feelings and behaviour towards the living environment are an expression of concern for what happens in a setting. In a sense, it may be described as a feeling of territoriality about one's residence. How individuals perceive their surroundings and their willingness to protect their territories are characteristic of proprietary feelings and behaviour.

To reduce the threat of criminal activities, residents and managers should be encouraged to develop and/or enhance their concerns for their environments. This may be accomplished by fostering proprietary feelings towards and behaviour in:

- the neighbourhood, and

- the building and on its site.

a) The Neighbourhood

When individuals perceive that they have little control over their environment, territorial and protective feelings are largely non-existent. By increasing proprietary feelings towards and behaviour in their neighbourhood, a sense of responsibility for their neighbourhood may be created, and individual feelings of security enhanced.

A majority of residents surveyed felt that the neighbourhood, in general, was unsafe and insecure. The composition of a mixed use district (like the study area), with its relatively transient population and constantly changing activities and users, may foster this feeling. Residents may view the neighbourhood as being controlled by other users and uses and, hence, may be unwilling to express any territorial concerns. These feelings may be most pronounced among people who have not resided in the neighbourhood for a long time.

Lack of concern about the neighbourhood may manifest itself in a "don't care" attitude towards general upkeep. Physical traces related to the lack of concern, such as poor maintenance, litter and graffiti, can increase the attractiveness of the neighbourhood to potential offenders. These may also deter residents from becoming familiar with the neighbourhood.

Recommendations:

Residents, Managers/ Owners

1. Report suspicious behaviour in the neighbourhood to the appropriate authorities. Be familiar with reporting procedures and agencies.

2. Get to know your neighbourhood; extend your territory beyond your building. Familiarize yourself with local businesses; make yourself known to people operating these services so that you are easily identified by your neighbours.

3. Enhance the appearance of your neighbourhood by not contributing to litter problems and encouraging others to do likewise. A well-kept community carries a "cared for" image, not attractive to potential criminals.

4. Help organize or participate in programs that prevent crime in your neighbourhood (Neighbourhood Watch and education programs), or promote the image of your neighbourhood (maintenance and planting programs).

5. Be active in encouraging the addition of services to your neighbourhood that can serve its residents (e.g. recreation facilities) so that you do not have to leave the area to obtain these services. This can be more convenient for you as well as enhancing the identity of the community.

Designers/ Planners

1. Provide a good variety of services in mixed use areas so that residents do not have to leave their neighbourhood to obtain these services, thus strengthening the community's identity.

2. Plan neighbourhoods with maintenance provisions in mind. Avoid creating areas that are difficult to maintain and provide adequate litter collection.

Police Services

1. Participate in community activities, offering advice to organizations. Familiarize yourself with the various services and activities in the area to establish your presence and to become acquainted with the people providing services in the area.

b) The Building and on its Site

The degree of concern for their living environment characterises how individuals will act in protecting their territory. Encouraging proprietary feelings towards and behaviour in their immediate surroundings can also reduce the threat of criminal activity, as people will be more willing to take actions against suspicious activities.

Low crime buildings surveyed tended to have more long term residents and managers than the crime prone buildings. Informal surveillance measures, such as controlling access by strangers, currently are practiced, but many residents are not familiar with other residents in their buildings.

The majority of residents surveyed in all sample buildings were somewhat familiar with crime prevention programs and reporting procedures, but there was a general lack of knowledge about crime in their buildings. Although both residents and managers surveyed indicated a commitment to implementing crime protection measures, very little has been done in this direction.

Residents demonstrated a certain degree of pride about their surroundings, indicating feelings of territoriality. These feelings and related actions (general upkeep and tidiness) were directly related to proximity to their suites (the closer to home, the more one cared).

Recommendations:

Residents

1. Get to know your neighbours. This will help you distinguish strangers from legitimate users. Report suspicious behaviour to the building manager.

2. Enhance the appearance of your building by picking up litter in the building and on site, and reporting maintenance problems to the building manager.

3. Familiarize yourself with crime reporting policies in the building to facilitate appropriate actions when circumstances arise. Request that policies be established if they currently do not exist.

4. Familiarize yourself with crime prevention information and programs available from the police.

5. Help organize or participate in programs that enhance the security of your building.

Managers/ Owners

1. Get to know all the residents in your building. Do not allow strangers into the building. Report suspicious behaviour to the proper authorities.

2. Familiarize yourself with available information and training programs that may be beneficial to the management and security of your building.

3. Establish policies for crime reporting in the building. Ensure that residents are aware of these procedures and the status of crime in the building.

4. Maintain a positive building image by conducting a regular maintenance program. Inform residents of such a program.

5. Develop liaisons with the police and other security personnel in the area. Inform them of your security needs.

6. Request that the area police service conduct security inspections of your building and its site. Act on their recommendations.

7. Request that the area police service present crime prevention programs to the residents. Organize this presentation within your building.

8. Accept responsibility for building security programs by encouraging participation and organizing meetings.

Designers/ Planners

1. Specify easy to maintain finishes in shared areas to facilitate upkeep of these areas.

2. Be willing to present information on building features to the residents and managers to increase their understanding of how the building works for them. Providing this familiarity may enhance their feelings of pride and territoriality.

Police Services

1. Be willing to provide advice to residents and managers in any inspection or information programs established in the building.

6.2.5 Strengthen the Social Organization of Residents and Managers

The social organization within an environment relies on individuals' perceptions of community. Strong, cohesive social patterns are based on close identification with a particular community. Actions, such as criminal activities, that threaten the well-being of the community and its existing social networks also pose threats to the individuals. Individuals in a society with a defined sense of community are willing to intervene or act against such threats to protect their own well-being and the well-being of the group.

Strengthening the social organization of residents and managers may be achieved in:

- the neighbourhood, and
- the building and on its site.

a) The Neighbourhood

Neighbourhoods comprised of a variety of different activities and users are often settings for criminal activities because of the absence of a unified sense of community. Strengthening social organization in these neighbourhoods reduces their attractiveness to would-be offenders.

From a residential viewpoint, the community structure in the study area does not reflect the typical demographic patterns of the City. The study area is characterised by a predominantly young adult working population. There are proportionately more seniors and singles, and fewer children compared to City-wide figures. Most people in the area are short-term residents. Factors generally associated with cohesive social organization (e.g. stable population, homeownership, residents at home during the day) are not present in most of the study area.

Of the people surveyed, few actually participated in community organizations within the study area. Not surprisingly, several residents considered the neighbourhood unsafe and insecure. Both these findings may contribute to an unwillingness to know the neighbourhood and develop a sense of community.

Recommendations:

Residents, Managers/ Owners

1. Get to know your neighbourhood; extend your territory beyond your building. Familiarize yourself with local businesses; make yourself known to people operating these services so that you are easily identified by your neighbours.

2. Help organize or participate in programs that prevent crime in your neighbourhood (Neighbourhood Watch and education programs), or promote the image of your neighbourhood (maintenance and planting programs).

3. Be active in encouraging the addition of services to your neighbourhood that can serve its residents (e.g. recreational facilities) so that you do not have to leave the neighbourhood to obtain these services. This can be more convenient for you as well as enhancing the identity of the community.

4. Participate in existing community programs. Join your community association to strengthen the community's identity and to familiarize yourself with your neighbours.

Designers/ Planners

1. Provide a good variety of services in mixed use areas so that residents do not have to leave their neighbourhood to obtain these services, thus strengthening the community's identity.

Police Services

1. Participate in community activities, offering advice to organizations. Familiarize yourself with the various services and activities in the area to establish your presence and to become acquainted with the people involved.

b) The Building and on its Site

An individual's willingness to intervene in any potential criminal act is based on how strongly he feels about the community. Strengthening social relationships within the building creates a sense of responsibility towards other residents and a willingness to protect individual and community property.

Residents in the low crime buildings surveyed generally tended to have more social relationships within their buildings than those residing in the survey's crime prone buildings. People in the low crime buildings were longer term residents, knew some of their neighbours, were willing to meet other residents, and had assumed responsibility for neighbours' vacant apartments. This last characteristic is notable as a significant number of break and enter activities occur in vacant suites.

In all buildings surveyed, the majority of managers knew or at least recognized most residents. Tenant organizations were not prevalent in the buildings studied.

Recommendations:

Residents

1. Get to know your neighbours. This will help you distinguish strangers from legitimate users. Report suspicious behaviour to the building manager.

2. Enhance the appearance of your building by picking up litter in the building and on site, and reporting maintenance problems to the building manager.

3. Familiarize yourself with crime prevention information and programs available from the police.

4. Help organize or participate in programs that enhance the security of your building.

5. Organize and/or participate in social activities in the building and in tenant associations to meet other tenants and to enhance the social networks in your building.

6. Request that a neighbour you know take care of your apartment when it is vacant, as a means of ensuring surveillance when you are absent. Alternately, help form a building committee or group (with management input and approval) to be responsible for vacant apartments.

Managers/ Owners

1. Get to know all the residents in your building. Do not allow strangers into the building. Report suspicious behaviour to the proper authorities.

2. Establish policies for crime reporting in the building. Ensure that residents are aware of these procedures and the status of crime in the building.

3. Request that the area police service present crime prevention programs to the residents. Organize this presentation within your building.

4. Accept responsibility for building security programs by encouraging participation and organizing meetings.

5. Establish social programs in the building to encourage familiarity between residents.

6. Establish or participate in committees for tending vacant apartments to encourage familiarity between residents and yourself, and to assist in the surveillance of unattended suites.

7. Be willing to discuss concerns with tenant associations. Your accessibility to tenants will encourage them to report problems in the building.

Designers/ Planners

1. Provide areas in the building and/or on site where residents may meet socially (e.g. party rooms, recreation areas).

Police Services

1. Be willing to provide advice to residents and managers on any inspection or information programs established in the building.

6.3 RECOMMENDATIONS FOR IMPLEMENTATION

To facilitate the implementation of the preceding recommendations, the following recommendations are made for each specific group of individuals involved in crime prevention and reduction strategies.

Residents

Crimes against individuals and their property was a major focus of this study. To assist in the implementation of the recommendations made for residents, individuals should undertake the following actions.

- Increase their awareness of existing crime reporting and prevention measures to become familiar with the appropriate actions for a given situation.

- Participation in, and help to formulate crime prevention programs in your community and/or your building.

Building Managers/Owners

Building owners and their agents, the building/resident manager, assume overall responsibility for the building and those residing in it. Their actions with regard to crime prevention and reduction can be enhanced by the following actions.

- Develop reporting procedures and record-keeping forms for documenting suspicious or illegal activities within the building and on site. These should be developed in conjunction with appropriate authorities. The existence of these procedures and forms should make it easier for individuals to file consistent information, and for owners/managers to maintain useful records as a basis for subsequent decision making.

- Develop procedures and forms for reporting maintenance problems within the building and on site. These forms should specify type and location of problems, and should be made accessible to residents for their use.

- Develop an inspection checklist for the building manager that details items to be inspected, frequency of inspection, observations and actions to be taken.

- Develop a record of building keys for the building manager that details how many keys each resident has, number of keys duplicated, and when locks are replaced or added.

- Organize resident/management committees to address concerns such as maintenance, security, apartment "sitting" and social activity.

Building owners have the additional responsibility of protecting their investment in the building and, consequently, the future of the neighbourhood. Their role in crime prevention also includes ensuring that management recommendations are followed. Owners can help protect their investments by participating in the development of the community, increasing their awareness of the issues affecting growth and development of the neighbourhood, and ensuring crime prevention strategies are incorporated in their planning, design and development of their building.

Designers/Planners

These individuals are responsible for providing for the functional requirements of residents and managers/owners in the physical setting. Recommendations to assist the crime prevention strategies mentioned include the following:

- Familiarize yourself with crime prevention strategies and their design implications. Similarly, investigate how various plans and designs affect implementation of these strategies.

- Develop planning and design checklists of positive crime prevention features that may be used to assess and evaluate planning and design work.

- Participate in the review and revision of existing codes and bylaws which are aimed at preventing crime, and in the development of new crime prevention codes and bylaws.

Police Services

Among the various groups detailed in this document, the police services represent the most organized group. Their expertise can provide valuable assistance to other groups interested in implementing crime prevention and reduction measures. The initiation of effective strategies may be facilitated in these ways:

- Develop inspection programs and security checks to be implemented on a regular, on-going basis. Such programs should provide residents and managers with sufficient information to conduct supplemental checks on their own between regular inspections.

- Actively seek out audiences for your education programs, which provide information on crime prevention measures. Programs should be developed for different audiences: designers/ planners, neighbourhood, residents and managers/owners, to respond to their specific needs.

- Assist in the development of standard reporting procedures, and guidelines and checklists to be used by other concerned groups.

- Find ways to actively work with public agencies and the private sector on project planning and design, land use and permit application review and publicly funded projects.

- Design a Neighbourhood Watch program for an apartment community and run the pilot program.

- Study neighbourhoods that are particularly vulnerable to crime and test crime prevention strategies.

- Use statistical information to develop and support the preceding recommendations. This information can form the basis of general security programs as well as building, situation or neighbourhood-specific strategies.

Crime and criminal acts are comprised of many factors, such as the presence of a vulnerable target or victim, and the ease of escape. Methods of crime prevention must respond to these factors. Effective measures rely on integrated actions by all individuals concerned. Few of the preceding recommendations alone can make a significant contribution to crime prevention.

As a practical guide to crime prevention, the recommendations have been directed at specific user groups. Individuals in these groups must assume responsibility for the implementation of recommendations. Safer living environments can be attained through their commitment and cooperation towards the effective implementation of crime prevention measures.

APPENDICES

APPENDIX A

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APPENDIX B

SOCIO-ECONOMIC DATA

APPENDIX B **SOCIO-ECONOMIC DATA**

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B-1

FIGURE 1

TOTAL DWELLING UNITS BY TYPE

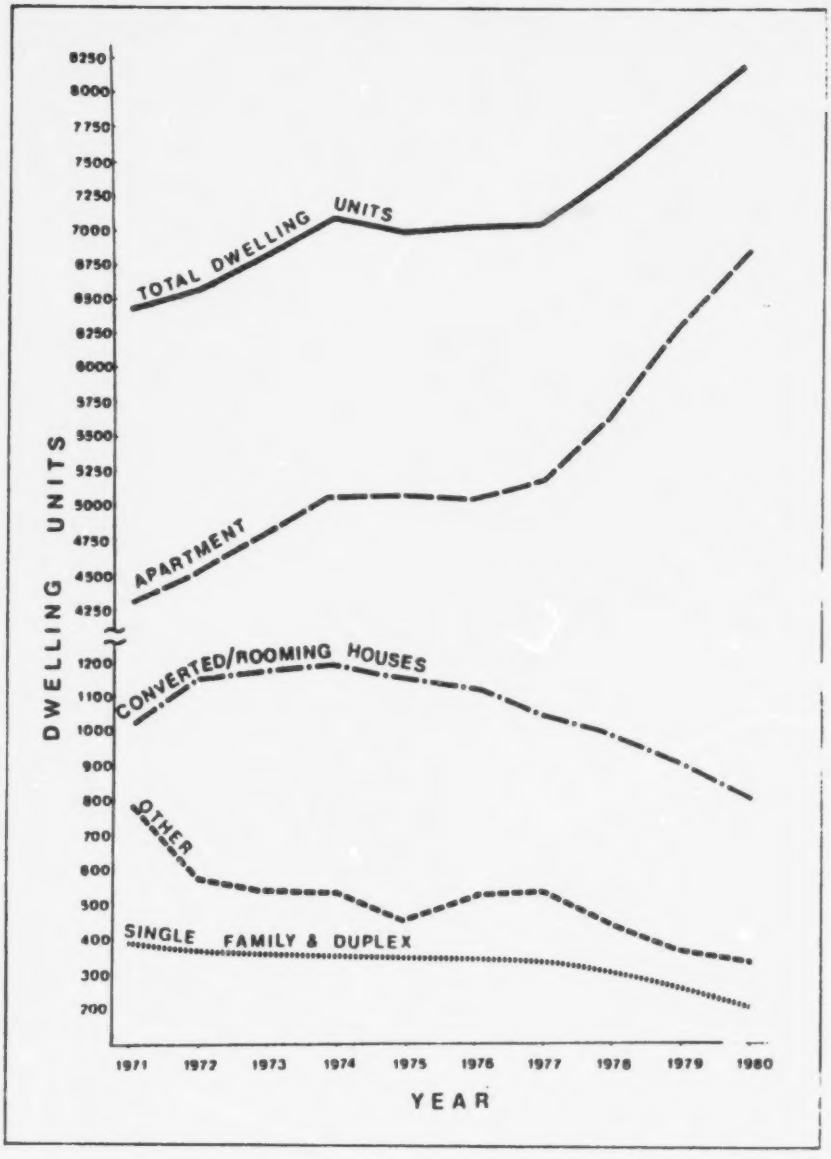
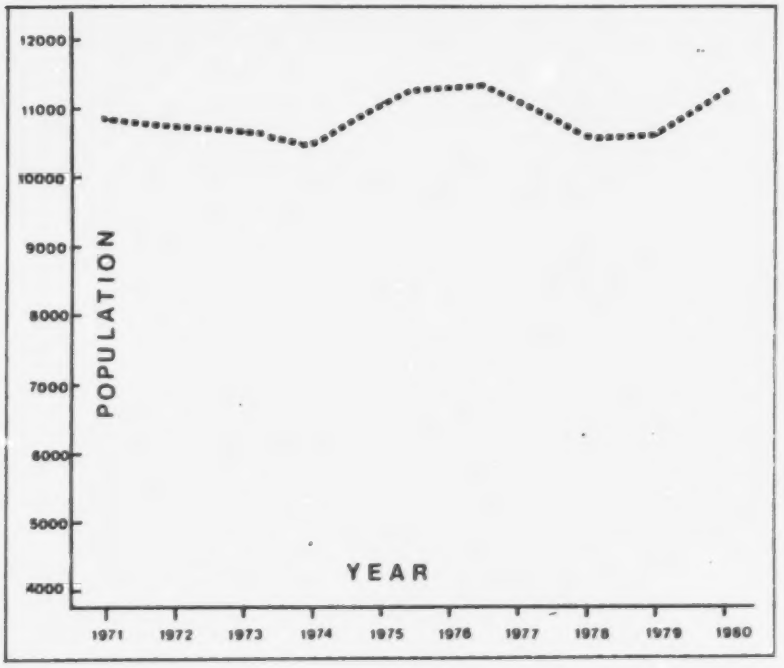


FIGURE 2

TEN YEAR POPULATION TREND



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3 Statistics Canada, 1981 Census of Canada.

The study area consists of Census Tracts 044, 045 and enumeration areas 201-208 of Census Tract 031, all in Federal Electoral Districts.

FIGURE 3

AVERAGE HOUSEHOLD SIZE IN STUDY AREA AND INNER CITY

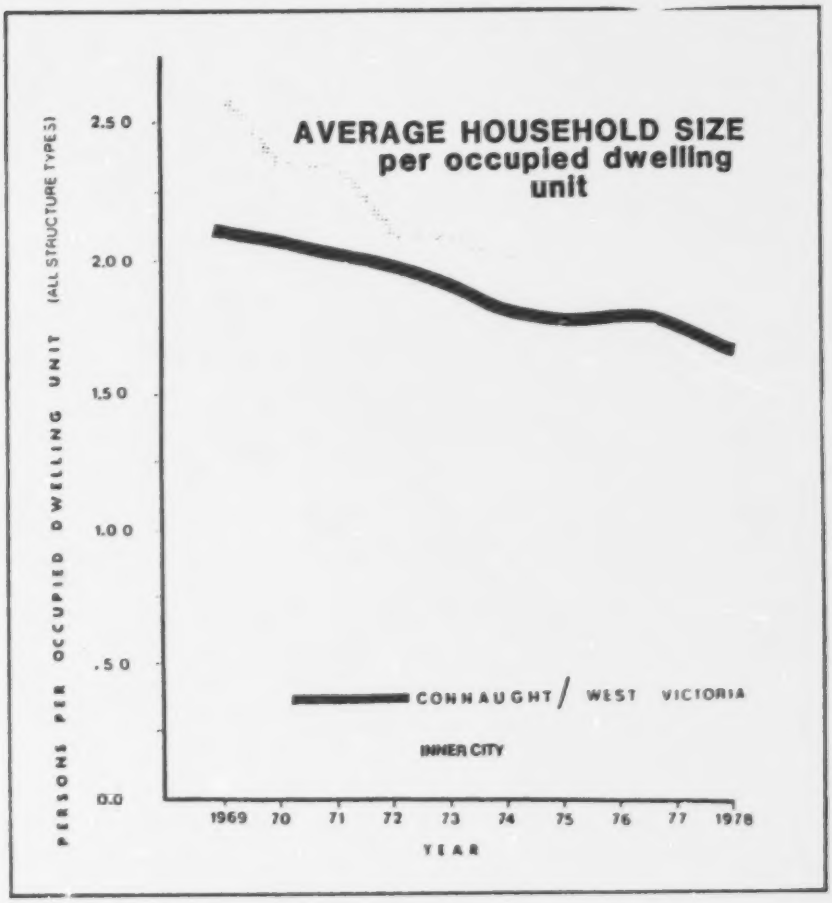


FIGURE 4

AGE/SEX PYRAMID

FIGURE 4.6: AGE/SEX PYRAMID compares the age distribution of people in the study area with that of the City at large.

The largest age group of people are between 20 and 34 years of age, representing 52 percent of all people in the study area.

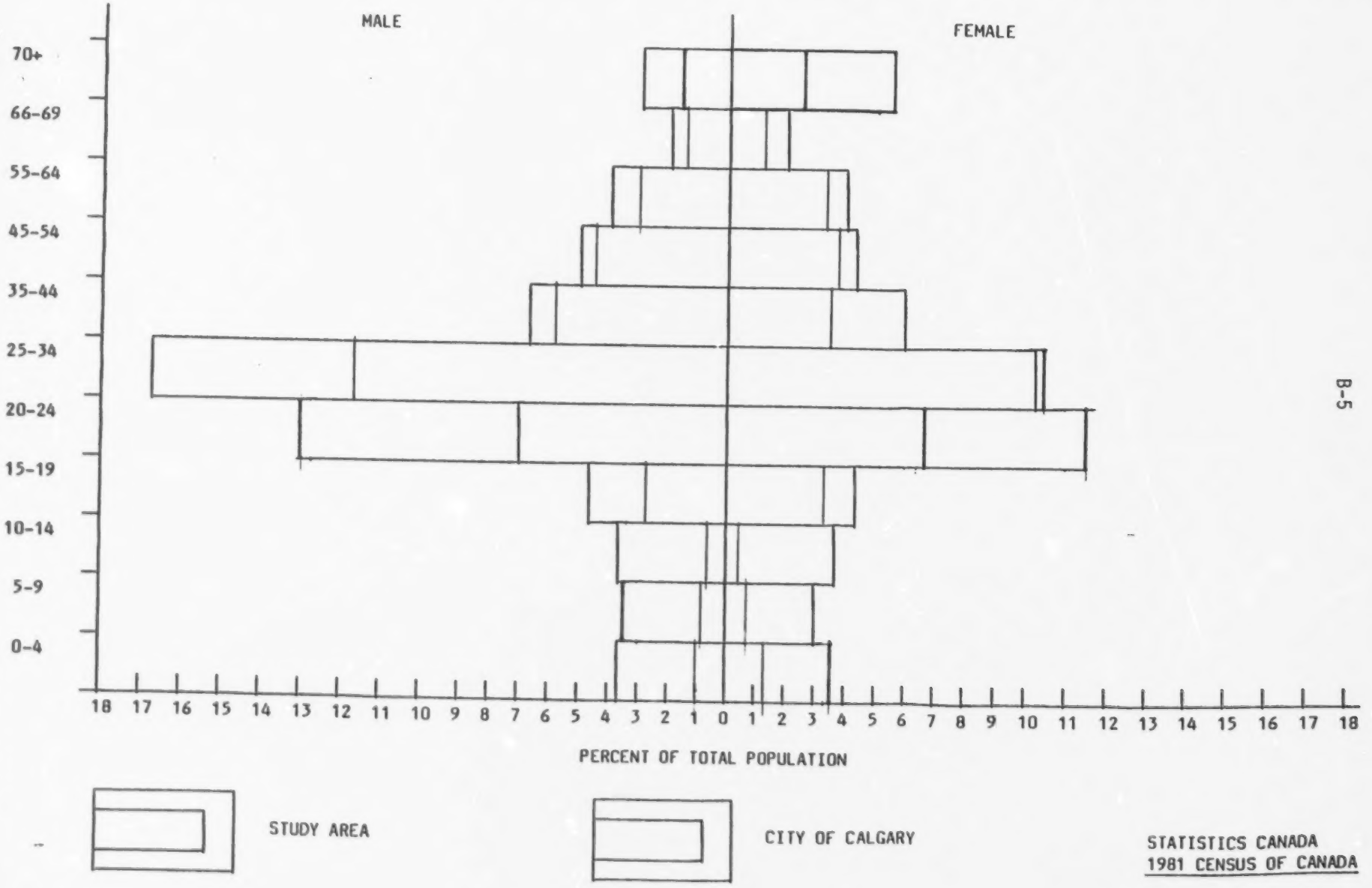
This same age group comprises only 36.7 percent of the City's population.

Within this age category of 20 to 34, it is interesting to note that among the 20 to 24 year olds both males and females proportionately out number people of similar age on a City-wide basis by a substantial margin. However, among those between 25 and 34, only males proportionately outnumber people of similar age on a City-wide basis by a substantial margin. Clearly, there is a significantly higher ratio of males to females for the 20 - 34 age group in the study area than is the case for the City as a whole.

There is proportionately about twice the number of people over age 65 in the study area as compared with the City. Senior citizens form 11.9 percent of the area's population,compared with 6.1 percent of the City's population for the same age group.

Children (people aged 0-19 years) form only 10.8 percent of the study area's population, whereas this age group accounts for 30.6 percent of the City's population.

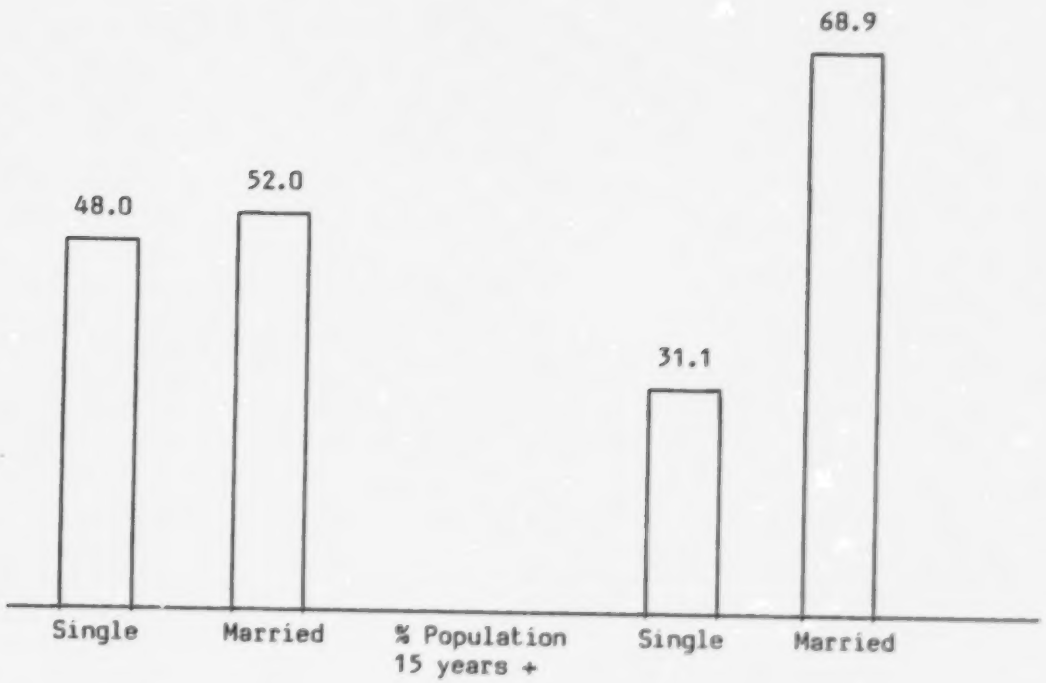
AGE/SEX PYRAMID



STATISTICS CANADA
1981 CENSUS OF CANADA

B-6
FIGURE 5

MARITAL STATUS IN STUDY AREA AND CITY



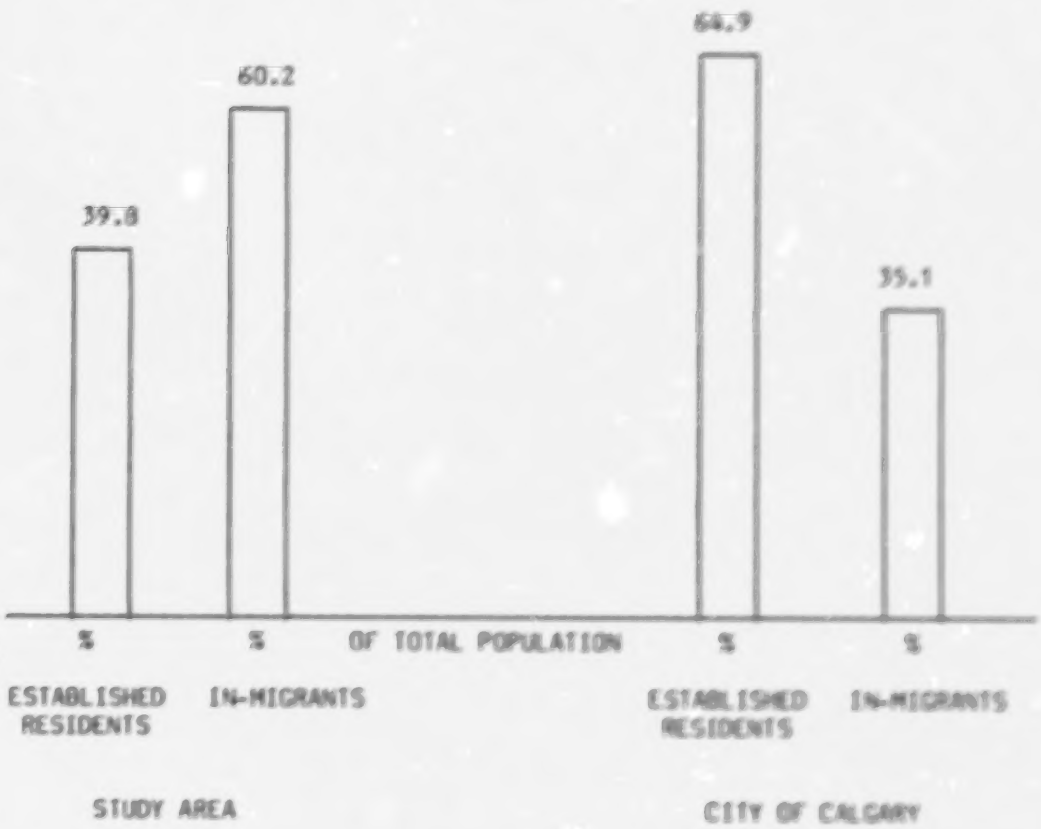
STATISTICS CANADA, 1981 CENSUS OF CANADA

FIGURE 6

POPULATION MOBILITY STATUS IN STUDY AREA AND CITY

ESTABLISHED RESIDENTS are non-movers (people who haven't moved in last 5 years) and non-imigrants (people who may have moved, but only within the census tract).

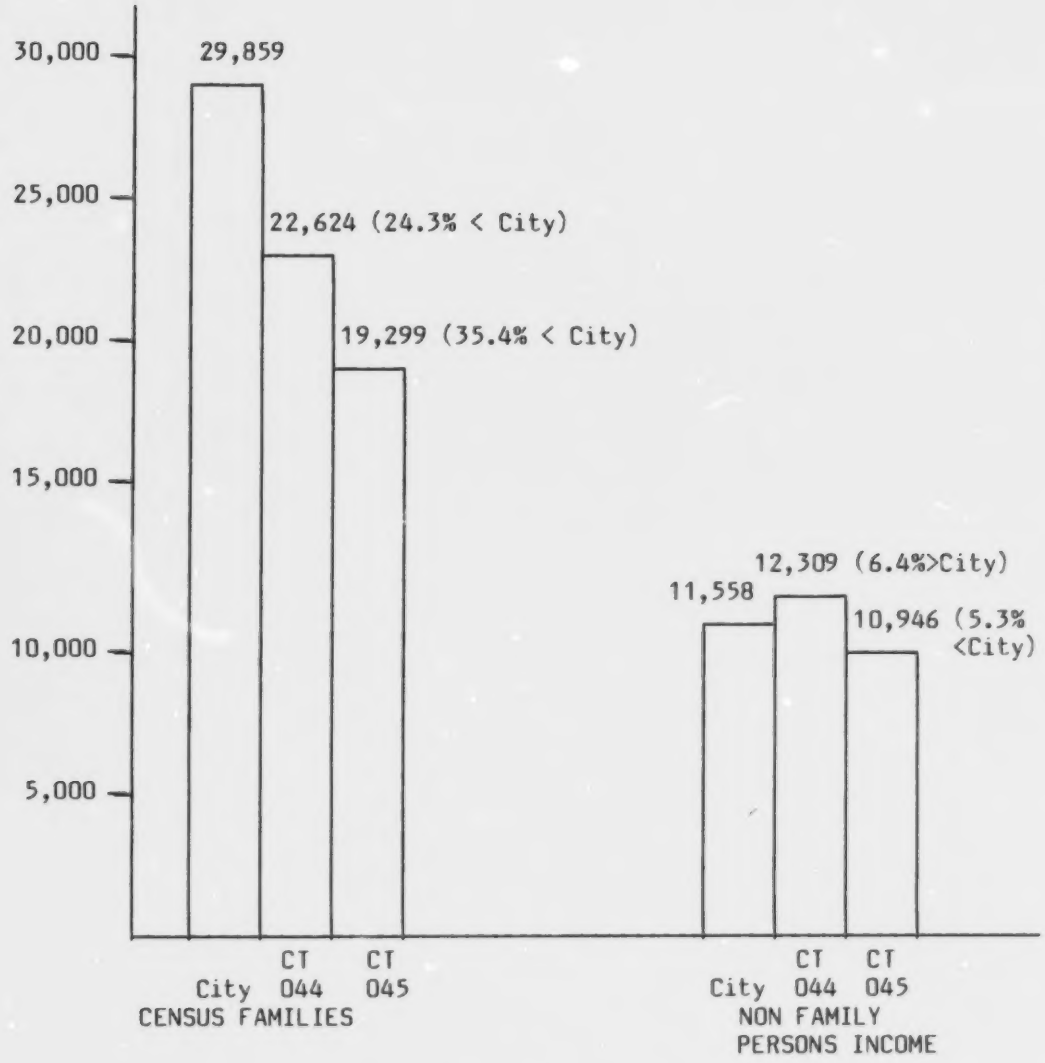
IN-MIGRANTS are migrants who have moved to the census tract from other city, same or other province, or outside Canada.



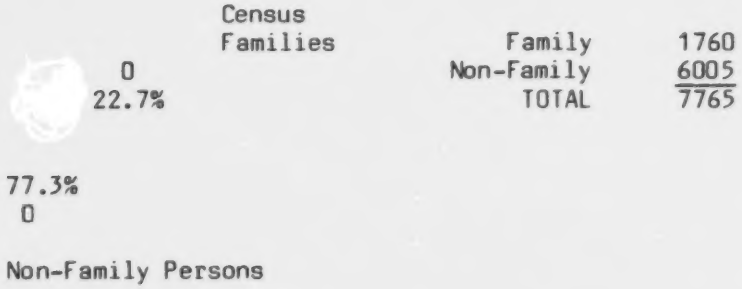
STATISTICS CANADA, 1981 CENSUS OF CANADA

FIGURE 7

INCOME LEVELS IN STUDY AREA AND CITY



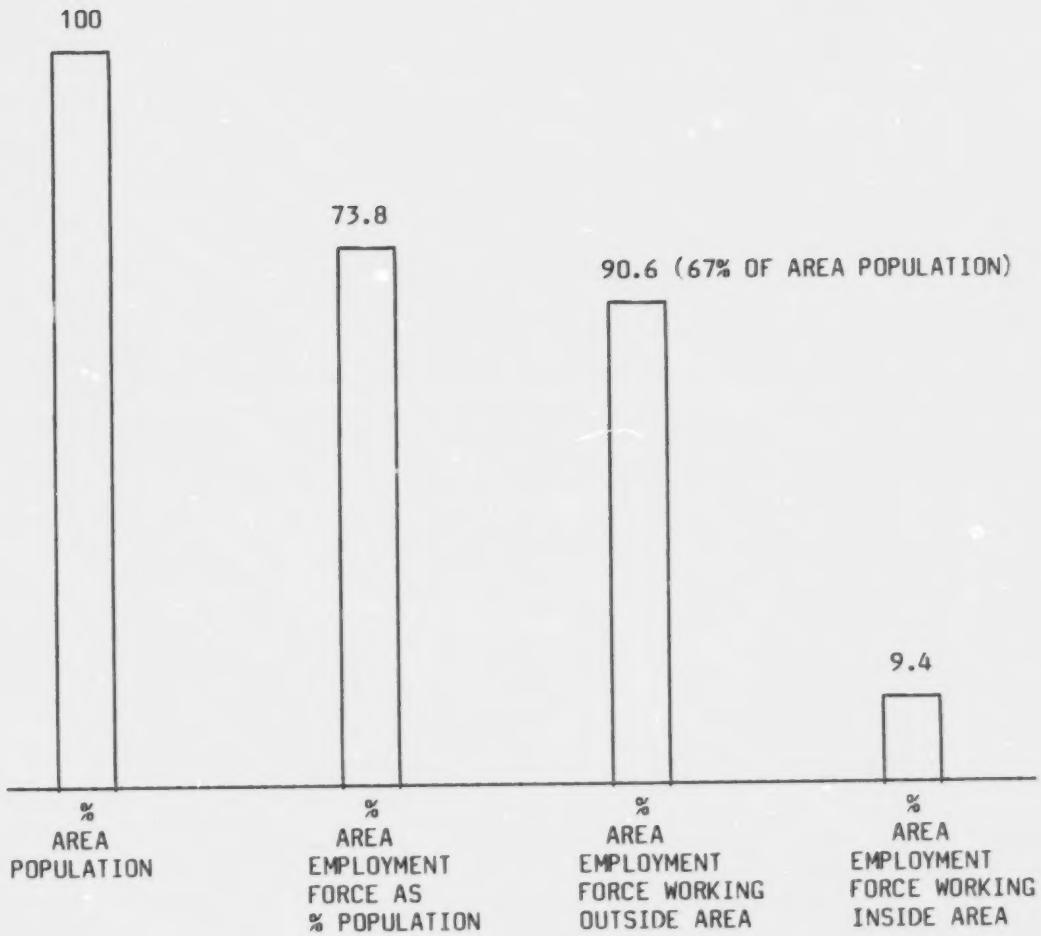
PROPORTION OF
CENSUS FAMILIES TO NON-FAMILY PERSONS



Family	1760
Non-Family	6005
TOTAL	7765

FIGURE 8

PLACE OF WORK


100
73.8
90.6 (67% OF AREA POPULATION)
9.4
% AREA POPULATION
% AREA EMPLOYMENT FORCE AS % POPULATION
% AREA EMPLOYMENT FORCE WORKING OUTSIDE AREA
% AREA EMPLOYMENT FORCE WORKING INSIDE AREA

STATISTICS CANADA, 1981 CENSUS OF CANADA

FIGURE 9

DEVELOPMENT RULES

LAND USE BYLAW 2P80

DENSITY:		From 321 to 395 units per hectare (130 - 160 units per acre)
YARDS:	FRONT	6m
	SIDE	3m for building to 6 storeys/6m for building over 6 storeys. No side yard required for parking structure to side or rear of building.
	REAR	7.5m
HEIGHT:		46m
AMENITY:		Balcony/patio
PARKING:		1.05 stalls per unit. 100% structured (covered) or underground. Balance to maximum of 10 stalls uncovered.
LANDSCAPING:		40 percent of site area (can include elevated decks within average of 2m from grade).

DEVELOPMENT CONTROL BYLAW 8600

DENSITY:		Based on unit size in relation to gross site area - typically marginally lower than maximum allowed under 2P80.
YARDS:	FRONT	6m
	SIDE	1.2m + 0.3m for each 0.9m building height over 8.5m
	REAR	7.5m
HEIGHT:		46m
AMENITY:		Balcony/patio and common amenity area based on density (guidelines only).
PARKING:		1.0 stalls per unit. To be to the side or rear of building.
LANDSCAPING:		Front yard and all land not taken up by parking or the building.

KEY DIFFERENCES

The key difference between the two bylaws are:

1. 2P80 allows for increased residential density.
2. 2P80 requires structural (covered) or underground parking.
3. 2P80 limits site coverage and landscaping of all roofed areas an average of 2m above grade.

Neither bylaw provides a mandate for evaluation of proposed developments from a crime prevention perspective, or to refuse approval of a project based on an anticipated crime problem.

DEVELOPMENT PARCELS

Typical city blocks are 79m wide by 152m long, comprised of twenty twenty 7.6m x 36.5m legal lots and a 6.1m lane dividing the block longitudinally. Avenue and Street right-of-ways are typically 20m with a 9.8m pavement width.

Development parcels on City blocks are typically the avenue to lane depth of 36.5m and of widths that are multiples of 7.6m. Recent development has been initiated on lots as narrow as 22.8m and as wide as a half block, but the lot width for multi-storey apartment development averages between 30m and 45m.

FIGURE 10

DISTRIBUTION OF RESIDENCES & OFFENCES IN WALK-UP AND HIGHRISE BUILDINGS

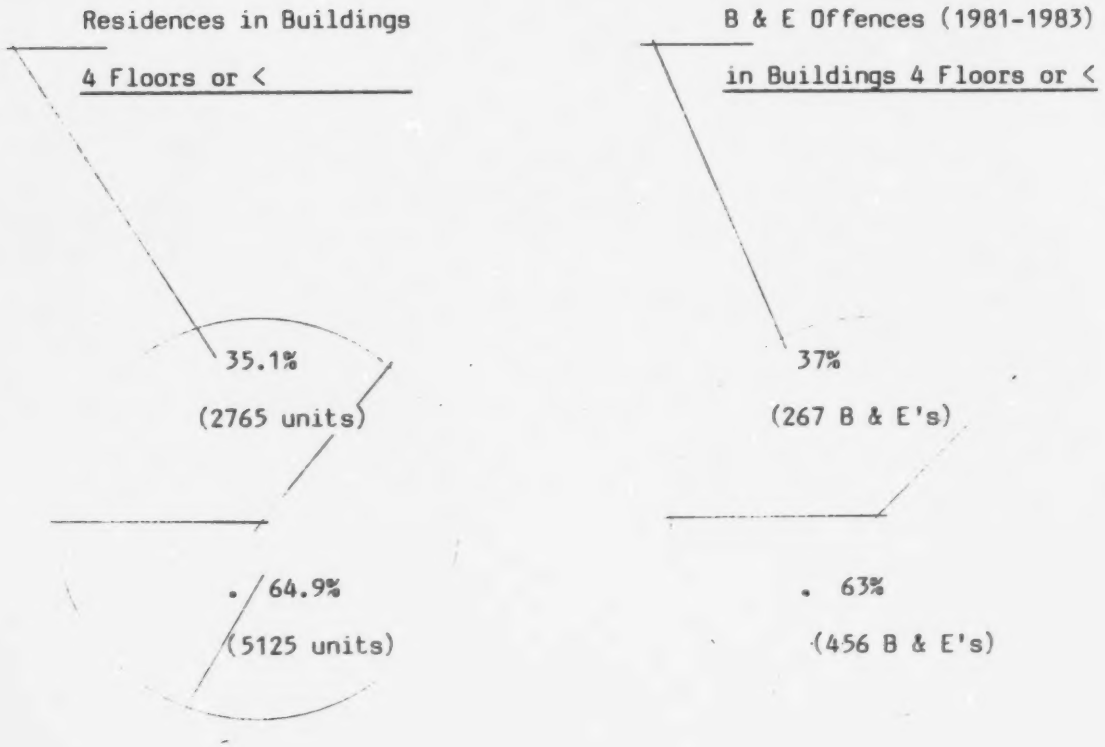


TABLE 1

EXISTING LAND USE AREAS

LAND USE	HECTARES	% TOTAL
Apartments	28.5	27.4
Non-Apartment	8.7	8.0
Vacant (Houses & Lots) Parking	11.3	10.8
Commercial Residential	38.8	37.3
Under Construction	4.5	4.0
Public Parks	4.0	3.8
Churches	2.6	2.5
Schools	2.6	2.5
Miscellaneous	2.8	2.7
	103.8	99.0

TABLE 2
EXISTING LAND USE DISTRICT AREAS

DISTRICT	HECTARES	% TOTAL
RM-7	45.3	43.6
CM-2	11.1	10.7
C-3	18.8	18.1
C-1	.12	.12
I-2	12.3	11.8
PS	1.2	1.2
PE	1.8	1.7
DC	13.1	12.7
	103.7	99.92

Following is a brief description of the pertinent features of each district.

RM-7 (Residential High Density Multi-Dwelling District)

The RM-7 District is predominant throughout most of the portion of the study area south of 12th Avenue S.W., representing 43.6% (45.3 net hectares) of the total study area. RM-7 is the highest density residential district under the City's Land Use By-law No. 2P80, permitting a maximum building height of 17 storeys, not exceeding 46 m; and density of 321 or 395 units per hectare, depending on the size of the development site.

CM-2 (Central Business Commercial District)

The CM-2 District represents approximately 10.7% of the study area. 1.9 net hectares of CM-2 lands are located along 12th Avenue between 2nd Street W. and 1st Street E. with the balance of the district north of 12th Avenue S.W. The CM-2 Central Business Commercial District is predominant in the Downtown Core. Under this land use district, building height is not regulated. Floor areas up to approximately 18 times the site area are developed under this district. However, the density is about half that in the area south of CPR railroad tracks.

C-3 (General Commercial District)

The C-3 District provides a wide variety of retail commercial and personal services uses, and dominates the major streets in the community. 18.8 hectares of C-3 lands are located along the entire length of 17th Avenue and 14th Street, most of 1st, 4th, and 8th Streets, and parts of 12th Avenue. Under the C-3 district, the maximum building height permitted is 46 m; the maximum gross floor area permitted is 3 times the site area.

C-1 (Local Commercial District)

The C-1 District provides for neighborhood retail commercial and personal services. A .12 ha C-2 district is located on 11th Street. C-1 allows a maximum building height of 2 storeys not exceeding 10 m.

I-2 (General Light Industrial District)

The 12.3 hectares of I-2 are predominant north of 12 Avenue S.W., particularly in the area west of 5th Street S.W. The district provides for a wide range of light industrial and commercial uses, in buildings not over 12 m. in height.

PE (Park, School and Recreation District)

Central Park on 12th Avenue, the location of the Central Memorial Public Library, is the only PE District in the study area. The park is 1.8 hectares in size.

PS (Public Service District)

Colonel Belcher Hospital, also on 12th Avenue, is the location of the only PS Public Service District in the community. Occupying one entire block, the site is 1.2 hectares in size.

D.C. (Direct Control District)

D.C. Districts comprise the remainder of the study area. Fifty two sites, representing 13.1 hectares of land, are dispersed throughout the study area. D.C. Districts are applied to developments which do not easily conform to the regulations of land use districts of the land use by-law in force at the time.

TABLE 3

DWELLINGS BY STRUCTURAL TYPE

Statistical Unit	Apts. in 5 Floor or > Buildings	Apts. in 4 Floor or < Buildings (includes converted houses)	Other Dwelling Types (single family, double,duplex & row dwellings)
CT 044	2,700	1,005	125
CT 045	1,625	740	215
EA 101	5	100	60
102	5	75	50
103	115	90	25
104	130	60	20
105	145	20	5
106	150	25	5
107	120	75	25
108	130	40	5
TOTAL NUMBER	5,125	2,230	535
PERCENT	65.1%	28.2%	6.7%

Statistics Canada, 1981 Census of Canada

APPENDIX C

SPECIMEN COPY OF SURVEY INSTRUMENTS

APPENDIX C **SPECIMEN COPY OF SURVEY INSTRUMENTS**

	No. of Pages
Questions for Representatives of Management Companies and Organizations Representing Management Companies	6 pages
District I Personnel Memos	1 page
Interview Survey with Convicted Offender	2 pages
Checklist for Archival Analysis of Offence Reports	2 pages
Checklist for Observational Survey of Apartment Building	15 pages
Letter and Questionnaire Survey of Resident Managers	8 pages
Letter and Questionnaire Survey of Residents	10 pages
Interviews with Architects	3 pages
Interviews with City Planning Officials	2 pages
Interview with Police Personnel	2 pages

Questions for Representatives of Management Companies and Organizations Representing Management Companies

APPENDIX C

QUESTIONS FOR REPRESENTATIVES OF MANAGEMENT COMPANIES AND ORGANIZATIONS REPRESENTING MANAGEMENT COMPANIES

Strategies for Risk Management in High Density Housing

INTERVIEW SCHEDULE

Date: _____

Time Started: _____ Time Completed: _____

Name of Interviewee: _____

Organization: _____ Phone No.: _____

Interviewer: _____

ORIENTATION

1. Introduce yourself.

2. Explain the purpose of the interview:

    (a) Brief description of the project.

    (b) One of our first obligations is to interview people who are active in the delivery of crime prevention programs and the management of high density properties - at the local, provincial and national level.

        These individuals are representatives from major urban police forces in Alberta, other provinces, representatives from the RCMP and key property management agencies.

We'd like to gather your explicit and candid comment on the subject of crime and crime prevention in high density residential properties - rental, condominium and senior citizen's apartment developments - so that when we proceed with the study we will have the best possible opinion to build on.

I would like your permission to record our discussion so that I may verify my brief notes after the interview.

The interview is divided into four parts:

    (1) Your background in the field

    (2) Your awareness of crime in high density housing and programs to combat crime

    (3) The impact of crime prevention programs

    (4) Your ideas about useful directions for new crime prevention measures in high density housing areas.

Do you have any questions of me before we start the interview?

I will start the tape recorder now.

FAMILIARIZATION

1. Will you tell me a little about your company and your role in it?

2. Is it local, Alberta, regional or national in scope?

3. What is the scope of your Company's work? How does it carry out the apartment management function (in a very general sense - what is its "style"?)

4. How many apartments do you manage in the Beltline?

5. How would you describe the tenent mix in the buildings you manage? (Male single/ female single/ couples/ couples with children/ more than two males/ more than two females?)

6. How would you describe the age distribution in the buildings you manage?

7. How would you describe the income mix in the buildings you manage? (low/ middle/ upper?)

KNOWLEDGE OF THE BELTLINE AREA

1. What is your opinion of the Beltline as a residential district?

2. What factors lead you to have this opinion? (housing quality/ social services/ physical amenity/ social mix/ income mix/ other?)

3. The risk rate for break and enter, burglary, car prowlings and theft are among the highest in the City.

   In your opinion, what are the significant social factors contributing to the high risk rate?

4. What physical characteristics of the area and surrounding are contributing to the high risk rate in your opinion? (neighbouring uses/ incompatible uses/ density/ traffic/ poor street lighting/ street system/ lane system?)

5. As a management company, what property crimes are you most concerned about in your Beltline properties?

6. In your opinion, what property crimes are of greatest concern to your tenants?

7. Do you think'safety and security' are tenant concerns when choosing an apartment to rent?

8. Do you consider 'safety and security' features to be useful marketing tools? How would you rate such features in relation to the more conventional 'amenities'?

9. Do you think the 'fear' of crime by tenants in buildings managed by your Company is more significant than the actual crime committed?

10. What policies or specific iniatives has your Company put into effect to reduce residential property crime and/or the fear of crime?

PHYSICAL DESIGN

1. Do you think that the site planning and design of the buildings your Company manages has an influence on building and unit vulnerability, and the amount of property crime within the building?

2. Can you think of any specific features of one or more buildings which make it a particularly safe building?

3. What design flaws in one or more buildings do you think create the opportunity for residential property crimr to be committed? (front, side and rear yard planning/ exterior and interior public spaces/ underground and surface parking areas/ unit planning/ elsewhere?)

4. What are some of the reasons why such flaws exist?

5. Do you have any ideas how they could be eliminated or reduced?

6. What responsibility for reduction of crime to you attribute to:
   a landlord?
   a tenant?
   an architect?
   the police?
   the community association?

7. Do you believe the police service could play a uesful role in the improvement of site planning and building design?

   How could that be most effectively accomplished?

8. How could agreed upon design improvements to apartment developments be most effectively implemented?
   persuasion?
   code?
   incentive?

9. Who advises your architects on what safety and security features should be included in new buildings?

MANAGEMENT

1. Do you think that a Company's management style and the building manager style has an influence on the vulnerability and the amount of property crime within the building?

2. Can you think of one or more specific management strategies which have made for a particularly safe building?

3. What are examples of poor management style or strategies which you believe could have contributed to increased building vulnerability or property crime?

4. What kind of person typifies a building landlord?

5. In your Company, what kind of general and specific orientation does a building manager get prior to and during his job?

6. With the current high vacancy rates in apartment buildings, is concern for security and safety greater, lesser or the same as it was, say, two years ago?

7. Has your Company or any building managers ever iniated specific programs involving tenants?, the police service?, the Community Association?, etc. to cope with a crime problem within a building?

8. In your opinion, was the program/s successful?

9. Have you ever asked for police assistance in resolving a recurring crime problem in one or more of your buildings? Did you follow their recommendations for physical or management changes?

Those are all the questions which we have of you.

Do you have any further comments which you would like to make about any of the areas we covered? Any other comments about the subject or study we are doing?

THANKYOU FOR YOUR COOPERATION.

District I Personnel Memos

TO: DISTRICT 1, ZONE 1-4 and 1-5 PERSONNEL

RE: CRIME PREVENTION STUDY - BELTLINE (ALL OF ZONE 1-5 AND PART OF ZONE 1-4)

DUE DATE: APRIL 19, 1984

The CPS is providing some assistance on a crime prevention study in the Beltline area (10th - 17th Ave.S; 1st St.E to 14th St.W).

The study will include surveying a number of apartment buildings, resident managers and tenants to find ways of reducing the opportunity for these property crimes: RESIDENTIAL BREAK and ENTER, WILFUL DAMAGE (PRIVATE TOTAL)and THEFT FROM VEHICLES (TOTAL).

Please assist in the best choice of survey buildings by writing down the NAME and ADDRESS of the three (3) worst buildings (those which have the most offences, in your opinion) for each property crime under consideration. It is understood that a particular building could qualify as a'worst'for more than one of the property crimes under consideration.

THANKS FOR HELPING TO IDENTIFY THE SURVEY BUILDINGS. WE'LL KEEP YOU POSTED ON THE STUDY'S PROGRESS.

If you know any of this information please check off the appropriate column.

Residential break and enter Name and/or address of building	Floors 4 or -	Floors 5 or +	Parking Open	Parking Covered	Parking Enclosed	Upkeep of building - grounds Good	Upkeep of building - grounds Fair	Upkeep of building - grounds Poor	Controlled access - lobby Yes	Controlled access - lobby No	Resident Manager Yes	Resident Manager No	Tenure Rental	Tenure Condo	Age Senior	Age Other
1.																
2.																
3.																
Wilful damage (private) Name and/or address of building																
1.																
2.																
3.																
Theft from vehicles Name and/or address of building																
1.																
2.																
3.																

Interview Survey with Convicted Offender

INTERVIEW SURVEY WITH CONVICTED OFFENDER

1. How many break-ins have you done?

2. How many did you get caught for?

3. How many before you were caught the first time?

4. How old are you and how long have you been doing B&E's?

5. How many times have you been arrested?

6. Before you broke into an apartment what did you look for, (mail, flyers, etc.)?

7. Did you have a preference for a certain kind of apartment building or location?

8. What did you take?

9. Did you work alone or with others?

10. How did you gain entry?

11. How did you get away?

12. Did you had any close calls in getting caught?

13. Did you choose any particular apartment neighbourhoods?

14. Did you wear any particular dress for the job?

15. How did you handle alarms?

16. Did you carry any tools?

17. Did you ever time yourself?

18. How long would you spend in a place?

19. Is there any particular place in an apartment where you would look?

20. Did you ever do the same place more than once? Why?

21. What if you found someone at home, or someone came home?

22. Did you every carry a weapon?

23. Were fingerprints a concern to you?

24. Did you carry any special equipment?

25 a. Did you ever do more than one building on the same block?

26. Did you travel to and from the scene in a vehicle?

27. Where would you park it?

28. Did you plan an escape route?

29. Have the police ever tried to bluff you?

30. How did you stay away from the police?

31. How did you approach the target building?

32 a. How did you approach the target apartment within the building?

33. Did you actually sit down and plan a break in?

34. What did you do with the stuff you stole?

35. Who makes the best house breaker?

36. How did you feel when in the house? Did you think that you had violated the privacy of your victim?

Checklist for Archival Analysis of Offence Reports

CHECKLIST FOR ARCHIVAL ANALYSIS OF OFFENCE REPORTS

Case Number	House B&E 01 - Commit 02 w/Intent 03 Break Out 0 Theft from Vehicle	Damage 01 +$50 02 -$50	Place of Occurrence	Day	Month	Year	Hour	Type of Premise or Location	Exact Location at Premise	How Attacked	Means of Attack (Tool/Weapon)

Case Number (contd)	Object of Attack	Value Stolen Property	Accused (Number Code only)	Preventive Advice Given	Point of Entry	Offence Description	Additional Comments

Checklist for Observational Survey of Apartment Building

CHECKLIST FOR OBSERVATIONAL SURVEY OF APARTMENT BUILDING

ADJACENT LAND USES AND STREETS

Location	S,L or PP*	Condition (Upkeep)	Use Opposite Ground/Upper	Condition Opposite (Upkeep)	Visibility from Opposite to Ground/ Upper Floors	Lighting at Street and Lane			
						On Site / Off Site			
						S	L	S	L
North									
East									
South									
West									

Comment on lighting (adequacy, upkeep)_____

Other Comments_____

Random check unlocked vehicles (Number) _____

ON-SITE - EXTERIOR OF SITE

Location	Y,P or Other (Specify)	General Description	**Upkeep	Visibility to Doors/Windows	Lighting (Extent)	Lighting (Upkeep)	Blind Areas	Furnishing (e.g. seats)
North								
East								
South								
West								

Other Comments _____

Is building address clearly marked at lane? _____

* S = street
L = lane
PP = private parking
Y = yard, front or side
P = parking
**Grass, shrubs, or other next to windows, etc.

EXTERIOR PARKING

Access to Parking from lane _____, street _____, both _____.

Location of Parking grade _____, and/or above-grade _____.

Do stall numbers correlate to suite numbers? _____.

Degree of Exposure completely open _____, partially covered _____.
covered & partially enclosed _____, covered & partially enclosed w/door _____.

Upkeep good _____, average _____, poor _____.

Comment on _____

Lighting Type: Fluorescent _____, Incandescent _____.

Adequacy: excellent _____, average _____, poor _____.

Maintenance (no. operating/no. not operating)
Fluorescent ___/___, Incandescent ___/___

Easily vandalized?_____ Location of Control _____.

Visibility From building to parking: Extensive___, Some___, Little___.

From lane to parking: Extensive___, Some___, Little___.

From street to parking: Extensive___, Some___, Little___.

From other buildings to parking: Extensive___, Some___, Little___.

Comment on_____

Blind corners? _____

Parking Occupancy at Survey

Day: Full _____, Half _____, Nearly Empty _____.

Night: Full _____, Half _____, Nearly Empty _____.

Random check unlocked vehicles (number) _____

Access/Egress at building Hardware

Entry/exit door Ex._____, Aver._____, Poor ___

Exit door Ex._____, Aver._____, Poor ___

Vehicle door _____ (delay in seconds)

Frames

Entry/exit door Ex._____, Aver._____, Poor_____

Exit door Ex._____, Aver._____, Poor_____

Vehicle door _____

Signs of tampering

Entry/exit door _____

Exit door _____

Vehicle door _____

Signs of wilful damage (comment on) _____

_____

Durability of finishing materials Ex._____, Aver._____, Poor_____

Comment on_____

Wall Finish & Colour _____

INTERIOR PARKING (completely enclosed)

Access to parking from lane _____, street _____, both _____

Access control door _____, no door _____

Location door top/bottom ramp _____, On/off right-of-way _____

Location parking grade _____, below grade _____

Number levels _____.

Do stall numbers correlate to suite numbers? _____

Upkeep good _____, average _____, poor _____

Comment on _____

Lighting

Type: Fluorescent _____, Incandescent _____.

Adequacy: excellent_____ , average_____ , poor _____ ,

Maintenance: (no. operating/no. not operating)
Fluorescent ___/___, Incandescent ___/___.

Wall finish and colour _____

Visibility (from elevator lobby to parking)

extensive _____, some _____, little _____

Blind corners: _____

Occupancy at survey

Day: Full_____ , Half_____ , Nearly Empty _____

Night: Full_____ , Half_____ , Nearly Empty _____

Random check unlocked vehicles (number) _____

Access/Egress at building Hardware

Entry/exit door Ex._____, Aver._____ , Poor_____

Exit door Ex._____, Aver._____ , Poor_____

Vehicle door _____ (seconds)

Frames

Entry/exit door Ex._____, Aver._____ , Poor_____

Exit door Ex._____, Aver._____ , Poor_____

Vehicle door _____

Signs of tampering

Entry/exit door _____

Exit door _____

Vehicle door _____

Lighting: (type, maintenance, adequacy)

Entry/exit door: Type _____,Adequacy_____, Maintenance _____

Exit door: Type _____,Adequacy_____,Maintenance _____

Vehicle door: Type _____,Adequacy_____,Maintenance _____

Signs of wilful damage (comment on) _____

Durability of finishing materials Ex._____, Aver._____, Poor_____

Comment on _____

Door opening devices

Type: Key _____ Card _____

Encoded Card _____

Garage Door Opener _____

Storage Areas

Hardware on access door: Ex.____, Aver. ____, Poor ____

Hardware on lockers: Ex.____, Aver. ____, Poor ____

WINDOWS & DOORS AT GROUND

Type

Location	D*	Hardware	W**	Hardware
North		Ex___Aver___Poor___		Ex___Aver___Poor___
East		Ex___Aver___Poor___		Ex___Aver___Poor___
South		Ex___Aver___Poor___		Ex___Aver___Poor___
West		Ex___Aver___Poor___		Ex___Aver___Poor___

Maintenance

Location	D	Hardware	W	Hardware
North		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___
East		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___
South		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___
West		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___

Lighting

Location	D	Type	Maintenance	Adequacy
North				
East				
South				
West				

Any doors or windows open? Comment _____

* Door type - specify generic
** Window type - specify generic

WINDOWS & DOORS AT SECOND FLOOR

Type

Location	D	Hardware	W	Hardware
North		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___
East		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___
South		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___
West		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___

Maintenance

Location	D	Hardware	W	Hardware
North		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___
East		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___
South		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___
West		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___

Lighting

Location	D	Type	Maintenance	Adequacy
North				
East				
South				
West				

Any doors or windows open? Comment _____

WINDOWS AND DOORS AT TYPICAL FLOOR

Type

Location	D	Hardware	W	Hardware
North		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___
East		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___
South		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___
West		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___

Maintenance

Location	D	Hardware	W	Hardware
North		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___
East		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___
South		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___
West		Ex___ Aver___ Poor___		Ex___ Aver___ Poor___

Lighting

Location	D	Type	Maintenance	Adequacy
North				
East				
South				
West				

Any doors or windows open? Comment _____

BUILDING AMENITIES AND SERVICES

Laundry facilities _____ Location _____

Visibility from abutting public way (e.g. hall, lobby, outside, etc.)___

_____

Lockable door?_____Lighting?_____

Recreation facilities (name) _____

Location _____

Visibility from abutting public way (e.g. hall, lobby, outside, etc.)___

_____

Lockable door?_____Lighting?_____

Estimated amount of use _____

Comment on condition _____

Retailing or other use? (name) _____

Location _____

Visibility from abutting public way (e.g. hall, lobby, outside, etc.) ___

_____

Comment on use in relation to residential _____

_____

Mail Delivery

Type:	To box in airlock	To box in lobby	To suite door
	_____	_____	_____

Postman access by: Own key _____ Resident Manager _____

Other _____

Newspaper Delivery? _____ Parcels? _____

Refuse removal

Storage of refuse container: external to building _____

interior room, no access to building _____

Interior room, w/access to building _____

Lockable? _____ Locked? _____

Management Office _____

Location _____ Visible to/from _____

MAJOR INTERIOR SPACES

Main entry vestibule/airlock

Visible from sidewalk? _____

If no, why not (e.g. entry turned, landscaping)? Describe _____

_____

Visible from interior lobby? _____

If no, why not? _____

Visible from other interior area? name _____

_____

Intercom here?_____ Can tenant's name and location in building be determined from intercom?_____ is intercom operative?_____

adequate electro-magnetic locking mechanism?_____

describe it _____

condition _____

adequate door frame?_____

any sign of tampering? Describe _____

signs of wilfull damage?_____

Lighting

Type:_____

Maintenance:_____

Adequacy: _____

Is building address and name clearly visible at entrance way and from sidewalk and street

Day _____ Night _____

Lobby Space (interior)

Visible from sidewalk? _____

If no, why not?_____

Visible from vestibule?_____

If no, why not?_____

Visible from other interior area? Name _____

Is there a seating space?_____ Furnished?_____

Furniture fixed?_____

Visible from elevator?_____

If no, why not?_____

Are finishes susceptible to wilful damage?_____

Describe _____

Signs of wilful damage? Describe _____

Lighting:

Type _____

Maintenance _____

Adequacy _____

Elevator Space

Visible from sidewalk?_____

If no, why not?_____

Visible from vestibule?_____

If no, why not?_____

Visible from lobby?_____

If no, why not?_____

Visible from other interior areas? Name _____

Can interior of elevator be surveyed prior to entry?_____

Are finishes susceptible to wilful damage?_____

Describe _____

Lighting:

Type: _____

Adequacy: _____

Maintenance:_____

Typical Corridor

Can entire corridor be surveyed upon exiting from elevator?_____

If no, why not?_____

Can all suite doors be surveyed upon exiting from the elevator?_____

If no, why not?_____

Does suite have any view of hallway?_____ How?_____

_____

Door frame adequate? _____If no, describe weakness _____

Door hardware adequate?_____If no, describe deficiencies_____

Lighting:

Type:_____

Maintenance:_____

Adequacy:_____

Refuse disposal room requires key access?_____

On-floor laundry room requires key access?_____

Are finishes susceptible to wilful damage?_____

Signs of wilful damage? Describe_____

Typical Suite

Balcony?_____

Is balcony accessible from neighbouring balcony?§_____

Describe _____

Describe door to balcony _____

Door frame adequate?_____If no, describe weakness_____

_____

Door hardware adequate?_____If no, describe deficiencies_____

_____

Window(s) to balcony?_____Describe_____

Window frame adequate?_____If no, describe deficiencies_____

_____

Window hardware adequate? _____If no, describe deficiencies _____

_____

Lighting to balcony:

Type:_____

Maintenance:_____

Adequacy:_____

Firestairwells

Can stairwell be surveyed prior to entry from corridor?_____

Does stairwell exit to outside?_____

Does stairwell connect to parking levels?_____

Lighting to stairwell:

Type:_____

Maintenance:_____

Adequacy:_____

Upkeep of stairwell _____

Wall finish and colour _____

Susceptible to damage?_____

Signs of wilful damage? Describe _____

Letter and Questionnaire Survey of Resident Managers

Keith
Deller
Architect + Planner

partners
Keith W Deller BArch. MAAA. MRAIC
John B McKenzie BArch. MUP. MCIP

October 15, 1984

Dear Resident Manager:

KEITH DELLER ARCHITECT + PLANNER, with the support of the CALGARY POLICE SERVICE, is conducting a study to identify practical ways of reducing residential break and enter, and theft from vehicles at apartments in your area, Connaught - West Victoria. The study is funded by the Alberta Department of Housing.

The survey part of the study is currently underway. It will identify characteristics of apartment buildings, management practices and resident lifestyle that may be contributing to the opportunity for successful commission of these crimes. Resident managers, residents, the police, architects, planners and offenders are all being asked for their observations and suggestions. The study's recommendations will be based in large part on the information provided by those who respond during the survey.

IN THE INTEREST OF IMPROVING BUILDING MANAGEMENT AND DESIGN TO MAKE SAFER AND MORE SECURE APARTMENT BUILDINGS, PLEASE TAKE THE TIME TO ANSWER THE QUESTIONS WHICH FOLLOW THIS LETTER.

Only a small number of resident managers can be approached in comparison to all those managing buildings in your area. Therefore, it is very important that we receive your answers to the questionaire. The owner of your building was contacted last spring regarding the survey of resident managers and tenants, and inspection of the building by the project team.

Please seal your completed questionaire in the envelope provided, and hold for pick-up by Keith Deller Architect + Planner on October 23, 1984.

For analytical purposes, it must be possible to correlate the answers you provide to your apartment building. However, no information is required or will be presented in any documents which would disclose your name or specific address within the building.

Thank you for your promptness and cooperation.

Yours very truly,

KEITH DELLER ARCHITECT + PLANNER

John B McKenzie, Partner

Note: KEITH DELLER ARCHITECT + PLANNER appreciates your acting as a mail-drop for residents' response to the questionaire. We will pick up residents' responses on October 23, 1984.

Ste 202. 300 - 14 th Street NW. Calgary. Alberta. T2N 1Z7 403 / 283 - 6404

QUESTIONAIRE SURVEY OF RESIDENT MANAGERS

1. Do you feel secure within

   a) your suite? Yes _____ No _____

   b) the building? Yes _____ No _____

   c) the building grounds? Yes _____ No _____

   d) your neighbourhood? Yes _____ No _____

   Why or why do you not feel secure?

   _____

   _____

2. How frequently have any of these offences occurred within your building in the last year? Indicate number of times.

	Number	Don't Know
a) Break and Enter	_____	_____
b) Theft from Vehicle	_____	_____
c) Damage to Vehicle	_____	_____
d) Assault	_____	_____
e) Mailbox Break-Ins	_____	_____
f) Vandalism	_____	_____

3. Do you have a policy for reporting criminal offences that occur within your building?

   Yes _____ No _____

   If yes, please describe policy _____

4. Do you have a policy for assisting tenants in reporting criminal offences that occur within your building?

   Yes _____ No _____

   If yes, please describe policy _____

5. In your opinion is security the responsibility of the tenant, the management, or both the tenant and management?

   Tenant _____ Management _____ Tenant & Management _____

6. List the three best security features found in your apartment building in your opinion.

   1) _____

   2) _____

   3) _____

7. List the three worst security features found in your apartment building in your opinion

1) _____

2) _____

3) _____

Has anything been done to improve these features?

Yes _____ No _____

8. Is anything done on a routine basis to improve the security in your building.

Yes _____ No _____

If yes, please describe _____

9. Is crime in this building serious enough to require any on-going attention by

a) yourself? Yes _____ No _____

b) the owner(s)? Yes _____ No _____

c) the tenants? Yes _____ No _____

d) the Calgary Police Service? Yes _____ No _____

If yes, what is being done and by whom?

_____

_____

10. How would you rate the quality of the locks on the following
(1. Very Good 2. Fairly Good 3. Average 4. Not too Good
5. Not Good At All)

a) Front Building Entry 1 ___ 2___ 3___ 4 ___ 5 ___

b) Fire Stair Exits to Outside 1 ___ 2___ 3___ 4 ___ 5 ___

c) Doors to Parking Area 1 ___ 2___ 3___ 4 ___ 5 ___

d) Suite Entry Doors 1 ___ 2___ 3___ 4 ___ 5 ___

e) Balcony Doors 1 ___ 2___ 3___ 4 ___ 5 ___

f) Laundry Room 1 ___ 2___ 3___ 4 ___ 5 ___

g) Recreation Room 1 ___ 2___ 3___ 4 ___ 5 ___

h) Locker/Storage Area 1 ___ 2___ 3___ 4 ___ 5 ___

i) Rear Building Entry 1 ___ 2___ 3___ 4 ___ 5 ___

j) Any other room or Area

_____ 1 ___ 2___ 3___ 4 ___ 5 ___

11. List some areas or objects in your building which have been vandalized.

_____

_____

12. Have any finishing materials been used in public areas of your building which could be easily vandalized? Regardless of whether or not they have been, please list.

Location	Material
_____	_____
_____	_____
_____	_____

13. Do you have a written job description? Yes _____ No _____.

If yes, does it state your responsibility respecting tenant and building security?

Yes _____ No _____.

If yes, what does it say?

_____

_____

14. Does your building have

a) An alarm system Yes _____ No _____

b) Surveillance cameras Yes _____ No _____

c) An intercome systems Yes _____ No _____

15. If your building has an Intercom System, how effective is it at controlling who enters the building?

1. Very Good ___ 2. Fairly Good ___ 3. Average ___

4. Not too Good ___ 5. Not Good At All ___

16. What places inside or outside your building might be good hiding places for would-be criminals?

_____

_____

17. Have you ever reported suspicious or illegal behaviour you observed or heard in your building?

Yes _____ No _____

If no, would you be willing to report suspicious or illegal behaviour?

Yes _____ No _____

18. Can you tell strangers from the residents of your building?

Yes _____ No _____

19. Is the lane behind your building well kept or is it cluttered with garbage?

Well kept _____ Cluttered with Garbage _____

20. Who's responsibility is the upkeep of the lane behind your building?

_____

21. Is the lane well lit at night?

Yes _____ No _____

22. Can anyone learn the tenant's name and location in the building from

a) the intercom call board Yes _____ No _____

b) the assigned parking Yes _____ No _____

23. Is your building's name and address clearly marked on the:

Street/avenue side? Yes _____ No _____

Lane side? Yes _____ No _____

24. In your opinion what percentage of tenants care about this building beyond their suite?

Care _____%

Don't Care _____%

100%

25. How many suites of your building are currently vacant? _____

26. Which area of the building has the suites which are hardest to rent?

Lower Floors _____

Middle Floors _____

Upper Floors _____

27. How often is the building rekeyed? _____

28. Do you change the apartment locks when new tenant(s) occupy a suite?

Yes _____ No _____

29. Would you be prepared to organize a meeting of residents in order to discuss security in your building?

Yes _____ No _____

30. Do you do security patrols of your building?

Yes _____ No _____ If yes, how frequently?_____

What is your procedure?_____

31. Does your building employ private security personnel?

Yes _____ No _____

32. How would you rate the resident manager-tenant relationship in your building?

1. Very Good ___ 2. Fairly Good ___ 3. Average ___

4. Not too Good___ 5. Not Good At All ___

33. Have you ever heard of the Connaught Community Association?

Yes _____ No _____

Are you a member? Yes _____ No _____

34. Do you attend religious services in this area?

Yes _____ No _____

35. Are you a member of a community, service or recreational organization not mentioned that meets in your area?

Yes _____ No _____

If yes, please name _____

36. Does a tenants' association operate in your building?

Yes _____ No _____

37. Do you advise tenants about precautions they should take against criminal activities?

Yes _____ No _____

38. Do you know what Block Watch is? Yes _____ No _____

39. Are any of your tenants in the apartment building during the day?

Yes _____ No _____

40. Can you be found in the apartment building between the hours of 8 a.m. and 4 p.m.?

Yes _____ No _____

41. Do you think 6 p.m. - 6 a.m. security coverage is necessary at the front door?

Yes _____ No _____

42. Do you advise tenants of the owners' eviction policy when they take up residence?

Yes _____ No _____

43. Have you ever evicted or recommended eviction of a resident from your buildings?

Yes _____ No _____

44. What are the main criteria for eviction? _____

_____

45. Is there a screening process for prospective tenants?

Yes _____ No _____

If yes, please describe briefly_____

46. Do you make an effort to group similar tenants within your building?

Yes _____ No _____

47. Does the Landlord Tenant Act adequately protect the interest of the Owner/Landlord in your opinion?

Yes _____ No _____

48. Do you think the police should patrol your area more often?

Yes _____ No _____

If yes, what do you think would be the main benefit for your building

_____

49. The Calgary Police Service has pamphlets containing crime prevention information. Have you read any?

Yes _____ No _____

50. Would you not report a crime because:

a) of fear of retailiation by the offender Yes _____ No _____

b) you want to avoid an appearance in court Yes _____ No _____

51. Have you ever requested the Police Service to present one or more of their crime prevention programs for your tenants?

Yes _____ No _____

52. Have you ever had the Police Service do a security inspection of your building?

Yes _____ No _____

53. Do you know what Operation Identification is?

Yes _____ No _____

If yes, do you think Operation Identification is helpful in reducing crime?

Yes _____ No ____

Have you recommended that your tenants use Operation Identification?

Yes _____ No _____

54. Which of the following services have permanent access to the building?

	Yes	No
appliance repair	___	___
cleaning	___	___
fire	___	___
garbage removal	___	___
gas	___	___
police	___	___
postal	___	___
telephone	___	___
other _____	___	___
_____	___	___
_____	___	___

Do you permit any of the above, or other personnel to make their own way within the building?

55. How long have you been the Resident Manager of this building?

_____years.

56. Name and address of building _____

_____

Letter and Questionnaire Survey of Residents

Keith
Deller
Architect + Planner

partners
Keith W Deller BArch. MAAA MRAIC
John B McKenzie BArch. MUP MCIP

October 15, 1984

Dear Resident:

KEITH DELLER ARCHITECT + PLANNER, with the support of the CALGARY POLICE SERVICE, is conducting a study to identify practical ways of reducing residential break and enter and theft from vehicles at apartments in your area, Connaught - West Victoria. The study is funded by the Alberta Department of Housing.

The survey part of the study is currently underway. It will identify characteristics of apartment buildings, management practices and resident lifestyles that may be contributing to the opportunity for successful commission of these crimes. Residents, resident managers, the police, architects, planners and offenders are all being asked for their observations and suggestions. The study's recommendations will be based in large part on the information provided by those who respond during the survey.

IN THE INTEREST OF A SAFER AND MORE SECURE APARTMENT, BUILDING AND COMMUNITY, PLEASE TAKE THE TIME TO ANSWER THE QUESTIONS WHICH FOLLOW THIS LETTER.

Only a small number of residents can be approached in comparison to the total population of your area. It is very important that as one of the selected resident group, you respond to the questions. Any additional observations or suggestions you have are also welcomed by the project team.

Please return your completed questionaire sealed in the envelope provided to your resident manager by October 22 , 1984. He has kindly agreed to hold it for pick-up by Keith Deller Architect + Planner.

For analytical purposes, it must be possible for the project team to correlate the answers you provide with your apartment building. However, no information is wanted or will be presented in any documents which would disclose any resident's name or specific address within a building.

Thank you for your promptness and co-operation.

Yours truly,

KEITH DELLER ARCHITECT + PLANNER

John B McKenzie, Partner

Ste 202, 300 - 14 th Street NW. Calgary, Alberta, T2N 1Z7 403 / 283 - 6404

QUESTIONAIRE SURVEY OF RESIDENTS

1. Do you feel secure within

   a) your suite? Yes _____ No _____

   b) the building? Yes _____ No _____

   c) the parking garage? Yes _____ No _____

   d) the building grounds? Yes _____ No _____

   e) your neighbourhood? Yes _____ No _____

   Why or why do you not feel secure?

   _____

   _____

2. How frequently have any of these offences occurred within your building in the last year? Indicate number of times.

	Number	Don't Know
a) Break and Enter	_____	_____
b) Theft from Vehicle	_____	_____
c) Damage to Vehicle	_____	_____
d) Assault	_____	_____
e) Mailbox Break-Ins	_____	_____
f) Vandalism	_____	_____

3. Are you aware of any management policy for reporting

   a) crime in your suite? Yes _____ No _____

   b) crime within your building? Yes _____ No _____

4. Have you been the victim of any criminal activities since moving into this building?

   Yes _____ No _____

   If yes, what criminal activities _____

   _____

5. In your opinion is security the responsibility of the tenant, the management, or both the tenant and management?

   Tenant _____ Management _____ Tenant & Management _____

6. Why did you choose your neighbourhood to live in? (Check all that apply).

   a) close to your work _____

   b) close to recreation facilities_____

   c) close to conveniences (shopping, restaurants, etc.) _____

   d) other (specify) _____

7. Why did you choose your building to live in? (Check all that apply)

   a) Rent _____

   b) Location _____

   c) Appearance of Building _____

   d) Security of Building _____

   e) Other (specify) _____

8. Do you feel threatened by the crime that occurs in your building?

   Very Much _____ Somewhat _____ Not At All _____

9. Is crime in this building serious enough to require any on-going attention by

   a) yourself? Yes _____ No _____

   b) the owner(s)? Yes _____ No _____

   c) the resident manager? Yes _____ No _____

   d) the Calgary Police Service? Yes _____ No _____

   If yes, what is being done and by whom? If not, do you know why not?

   _____

   _____

10. Would you be prepared to participate in any resident program to make this building more secure?

    Yes _____ No _____

11. Are you aware of any Crime Prevention Programs operating in

    a) your neighbourhood Yes _____ No _____

    b) your building Yes _____ No _____

    If yes, please specify _____

12. What is your opinion of the quality of the locks:
(1. Very Good 2. Fairly Good 3. Average 4. Not too Good
5. Not Good At All)

a) Front Building Entry 1 ___ 2___ 3___ 4 ___ 5 ___

b) Fire Stair Exits to Outside 1 ___ 2___ 3___ 4 ___ 5 ___

c) Doors to Parking Area 1 ___ 2___ 3___ 4 ___ 5 ___

d) Suite Entry Doors 1 ___ 2___ 3___ 4 ___ 5 ___

e) Balcony Doors 1 ___ 2___ 3___ 4 ___ 5 ___

f) Suite Windows 1 ___ 2___ 3___ 4 ___ 5 ___

13. Which doors in your building are often left propped open, or are easily opened without a key?

a) Front Building Entry Yes _____ No _____

b) Rear Building Entry Yes _____ No _____

c) Fire Stair Exits to Outside Yes _____ No _____

d) Doors to Parking Area Yes _____ No _____

14. Do you lock your door

a) everytime you leave the building? Yes _____ No _____

b) everytime you leave your floor? Yes _____ No _____

c) everytime you leave your suite? Yes _____ No _____

15. Rate the effectiveness of the following.
1. Very Good 2. Fairly Good 3. Average 4. Not too Good
5. Not Good At All

a) deadbolt locks 1 ___ 2___ 3___ 4 ___ 5 ___

b) alarm systems 1 ___ 2___ 3___ 4 ___ 5 ___

c) surveillance cameras 1 ___ 2___ 3___ 4 ___ 5 ___

16. Have you every reported suspicious or illegal behavior you observed or heard in your building?

Yes _____ No _____

If no, would you be willing to report suspicious or illegal behavior

Yes _____ No _____

17. What places inside or outside your building might be good hiding places for would-be offenders.

_____

_____

18. Do you take any special precautions because of the possible hiding places your've noticed.

Yes _____ No _____

If yes, what are these precautions _____

_____

19. What areas in your building do you think should be better lit? (Check all that apply)

a) Entrance/Lobby Yes _____ No _____

b) Stairwells Yes _____ No _____

c) Outside Parking Area Yes _____ No _____

d) Inside Parking Area Yes _____ No _____

e) Hallways Yes _____ No _____

f) Laundry Room Yes _____ No _____

g) Recreation Areas Yes _____ No _____

h) Other (specify) _____ Yes _____ No _____

20. Have you ever asked that something be done about a poorly lit area

Yes _____ No _____

If yes, what was done? _____

21. In what areas have you frequently noticed that light fixtures are not working? (Check all that apply).

a) Entrance/Lobby _____
b) Stairwells _____
c) Parking Areas _____
d) Hallways _____
e) Laundry Room _____
f) Recreation Areas _____
g) Other (specify) _____

22. Can you observe any of the following from a window in your suite?

a) other suite entry doors Yes _____ No _____

b) exterior entry doors to your building Yes _____ No _____

c) exterior entry doors to neighbouring buildings Yes _____ No _____

23. Have you ever reported suspicious or illegal behavior you've observed from your suite?

Yes _____ No _____

24. Which of the following areas do you observe on your way to and from your building?

a) locker room Yes _____ No _____
b) laundry room Yes _____ No _____
c) mailboxes Yes _____ No _____
d) recreation room or area Yes _____ No _____
e) parking lot Yes _____ No ____
f) parking garage Yes _____ No _____
g) outside recreation area Yes _____ No _____
h) child play area Yes _____ No _____
i) other areas (specify) Yes _____ No _____
_____ Yes _____ No _____
_____ Yes _____ No _____
_____ Yes _____ No _____

25. Do you ever walk in the lane behind your building

a) during the day Yes _____ No _____

b) at night Yes _____ No _____

26. Is the lane behind your building well lit at night?

Yes_____ No_____

27. Is the lane behind your building well kept, or cluttered with garbage?

Well kept _____ Cluttered with garbage _____

28. Can you tell strangers from the other residents of your building?

Yes _____ No _____

29. Do you know anyone in the building?

Yes _____ No _____

30. Do you have any close friends in the building?

Yes _____ No _____

31. Do you consider your neighbours friendly?

Very friendly ____ Somewhat friendly ____ Not friendly _____

32. Do you feel comfortable with the other people who live in the building?

Very comfortable ____ Somewhat comfortable ___ Not comfortable ___

33. Do you think living in a smaller apartment building would mean you'd know and recognize more people?

Yes _____ No _____

34. Would you like to know more people in your building?

Yes _____ No _____

35. Would you intervene if suspicious or criminal behavior occurred outside?

a) a neighbour's apartment Yes _____ No _____

b) a stranger's apartment Yes _____ No _____

36. Can you name any areas inside or outside your building which do not appear to be under anyone's control or responsibility?

_____

37. Would you clean up strewn papers in the following areas?

a) Lobby Yes_____ No_____

b) Hallway Yes_____ No_____

c) Outside Grounds Yes_____ No_____

If not, why not?_____

38. Did you ask if your apartment door locks were changed when you moved in?

Yes_____ No_____

39. If management asked you to meet with other residents to discuss building security would you attend?

Yes_____ No_____

40. If you saw someone destroying property in your building what would you do?

_____

41. Have you ever asked a stranger in the building if you could assist them in any way?

Yes _____ No _____

42. Have you ever let an individual into the building who wasn't there to visit you?

Yes _____ No _____

43. Have you ever heard of the Connaught Community Association?

Yes _____ No _____

Are you a member?

Yes _____ No _____

44. Do you attend religious services in this area?

Yes _____ No _____

45. Are you a member of an organization not mentioned that meets in your area?

Yes _____ No _____

If yes, please name _____

46. Have you ever attended a presentation on household security?

Yes _____ No _____

If yes, who presented it _____

47. Do you know what Block Watch is?

Yes_____ No _____

48. Have you ever looked after a neighbour's apartment while that person was away?

Yes_____ No _____

49. Would you pay an increase in rent to have security in your building from 6 p.m. to 6 a.m.?

Yes_____ No _____

If yes, how much would you pay? _____

50. If you had a choice would you prefer to live next to people

a) older than you? _____

b) younger than you? _____

c) your age? _____

d) doesn't matter? _____

51. Has anyone ever complained about your behaviour in the building?

Yes _____ No _____

If yes, was it justified Yes _____ No _____

If yes, was any subsequent action taken? Explain _____

_____

52. Do you think the police should patrol your area more often?

Yes _____ No _____

If yes, what do you think would be the main benefit for you?

_____

53. The Calgary Police Service has pamphlets containing crime prevention information. Have you read any?

Yes _____ No _____

54. Would you not report a crime because

a) of fear of retaliation by the offender? Yes_____ No _____

b) you want to avoid an appearance in court? Yes_____ No _____

54. Do you know what Operation Identification is?

Yes _____ No_____

If yes, have you used the program?Yes _____ No_____

If yes, do you think Operation Identification is helpful in reducing crime?

Very helpful _____ Somewhat helpful _____ Not helpful_____

56. Have you installed additional locks on your doors or windows?

Yes _____ No _____

57. Has the management prevented you from installing additional locks on your doors or windows?

Yes _____ No _____

58. Do you park a car in the building

parking lot? Yes _____ No _____

garage? Yes _____ No _____

59. Are you

a) male _____

b) female _____

60. What is your age?

a) under 25 years _____

b) 26-35 years _____

c) 36-45 years _____

d) 46-55 years _____

e) 56-65 years _____

f) over 65 years _____

61. Are you

a) single _____

b) married _____

c) common-law _____

62. Are you the sole occupant of the apartment?

Yes _____ No _____

If no, how many live in the apartment? _____

63. Which of the following categories best describes your total family income during 1983?

a) less than $15,000 _____

b) $15,000 to $19,999 _____

c) $20,000 to $29,999 _____

d) $30,000 to $39,999 _____

e) $40,000 or more _____

64. Do you own or rent your suite?

Own _____ Rent _____

65. If renting, did you sign a lease?

Yes _____ No _____

If yes, is the lease for:

6 months _____ 1 year _____ 2 years _____ Other (specify) ____

66. Are you usually away from the suite

a) during the day Yes _____ No _____

b) during the evening Yes _____ No _____

67. In your opinion, is your floor usually vacant during

a) the day Yes _____ No _____

b) the evening Yes _____ No _____

c) on weekends Yes _____ No _____

68. How long have you lived in this suite? _____ years.

69. How long have you lived in this building? _____ years.

Interviews with Arcnitects

INTERVIEWS WITH ARCHITECTS

Eight Calgary firms were architects for the thirteen sample buildings. Among these firms nearly all have experienced considerable change in size and staffing during the past two years. In some instances principals who may have been chiefly responsible for the building are no longer with the firm.

The available representatives of the architectural firms will be interviewed individually.

The interviewer will briefly review the goals and current status of the project, and explain why the architects' opinions are being solicited at this time. The following questions will be the basis for directing the discussion and opening up areas of special knowledge, interest or experience in the field.

QUESTIONS

1. Have you ever been a victim of residential property crime, or are you a member of a local crime prevention program? If yes, has your experience with crime had any influence on the way you think about or design high density housing?

2. What do you know about residential property crime in Calgary's medium and high density neighbourhoods? As architect for one or more apartment buildings in the Beltline, did you acquire any special knowledge about property crimes in the area.

3. Do you think an architect has any special responsibility to consider crime prevention in the design of residential buildings? Why or why not do you think so?

4. Have you ever read anything about design for crime prevention or received any training you consider to have been helpful in reducing offender opportunity through the design of high density housing?

5. In your opinion, what aspects of residential property crime and its prevention do you consider to have been influential in the design of your high density housing in the Beltine?

6. Have you seen in Calgary, or any other places, examples or features of high density housing you considered to be effective in discouraging residential property crime? What are some of the examples?

7. In the case of your project(s) in the Beltline area, do you recollect that property crime and its prevention was ever a consideration by the developer at the time this project was put together? If no, did you ever raise it as an issue? If yes, what were the developers interests and concerns?

8. How do you think the Calgary Police Service could assist you to reduce offender opportunity in the design of high density housing. Are you aware the C.P.S. will provide this assistance?

9. Do you think the circulation of Development Permit and/or Building Permit plans to the police department for comments on plans would benefit housing design? What are the liabilities of such a circulation?

10. Have you ever initiated follow-up visits at any of your built projects to learn how they function relative to the original intention? Have you made any discoveries relative to crime prevention?

11. From our surveys to date we have found examples of:

- inadequately lit parking areas and structures,
- use of easily vandalised lighting fixtures in parkades, and in other public areas,
- common exit stairs for parkade and upper floors of buildings with no control point between the two,
- blind areas at exit doors,
- exit doors that are not visible from the front or rear of the building,
- poor quality hardware on: suite entry doors, balcony doors, other suite windows, access doors from parking garages, fire exit doors and the principal entrance,
- public lobby areas and elevator waiting areas not easily visible from sidewalks in front of the building,
- stairs not visible prior to entry,
- laundry areas and other amenitiy spaces tucked away in basement areas and/or completely invisible from public ways in buildings,
- landscaped roof decks over parking allowing uncontrolled acess to second floor suite doors and windows,
- ground floor suites which won't rent,
- adjoining or continuous strip balconys frequently used as alternate access to apartment suites.

As the architect, you are in control when it comes to directing the owner's decision making on matters typified by the above examples. Why do you think we saw and heard about so many of these easily

rectified faults? What steps do you suggest be followed to see such faults eliminated in the design of future buildings? Have you any suggestions as to how some of these problems could be economically rectified in the existing buildings?

12. In what ways, if any, does the building code affect design solutions meant to reduce criminal opportunity in a high density building? Can you cite some specific instances from your own experience?

13. In what ways, if any, does the Calgary Land Use By-Law affect design design solutions meant to reduce criminal opportunity in a high density building? Does it contain requirements which make certain areas costly and/or difficult to secure?

14. In what ways, if any, does the owner/developer restrict your range of choice on matters like door and window hardware, lighting fixtures in public areas, access control features (intercome, garage door control, etc.)?

Thank you for your assistance.

Interviews with City Planning Officials

INTERVIEW WITH CITY PLANNING OFFICIALS

Three individuals at the Calgary Planning and Building Department (representing Policy formulation and Development Control) will be requested to attend a single interview meeting.

The interviewer will briefly review the goals and current status of the project, and explain why the Planners' opinions are being solicited at this time. The following questions will be the basis for directing the discussion and eliciting comments demonstrating special knowledge, interest or experience in the field.

QUESTIONS

1. Have any of you ever been a victim of residential property crime or are you a member of a local crime prevention program? If yes, has your experience with crime had any influence on the way you think about your role or perform your jobs as municipal planners?

2. How would you describe your knowledge of residential property crime in the areas where you are formulating residential development policy and/or processing high density residential development permit applications?

3. What effect do you think that specific knowledge about residential property crime and crime prevention has/would have on the advice you give to applicants or the recommendations you make to the approving authority? Why or why not do you think so?

4. Have any of you ever read anything about planning for crime prevention or received any training you consider to have been helpful in planning policy work or development control? If yes, can you elaborate? If no, how do you think such knowledge or training could be helpful?

5. Our understanding is that the Calgary Land Use By-Law contains no mandate for reviewing projects, making recommendations to applicants or the approving authority from the aspect of crime prevention. Is that understanding correct? Is there any indirect mandate which would permit such a focus?

6. To our knowledge, the Connaught/West Victoria ARP does not address the matter of crime and its prevention. Should this subject have been a keypoint in the policy plan? In other community land use planning (ARP's and ASP's) is consideration given to crime and its prevention? Please elaborate.

7. Planning for crime prevention is an integral part of residential policy planning in Edmonton. Furthermore, there is an explicit

mandate for this focus in the Edmonton Land Use By-Law. Was a similar mandate considered when Calgary's new Land Use By-Law was under preparation several years ago? If so, what happened? If not, why wasn't it put forward?

8. Have any of you, or your staff, ever consulted representatives of the police department about the implication of any land use amendments, development permit applications or land use policy relative to crime prevention? Have police department opinions or statistics ever been used to support the recommendation of the Planning and Building Department to an approving authority or appeal board? How was the informtion regarded relative to the mandates in the Land Use By-Law and Calgary Plan?

9. Have any of you ever sought the advice of the police department about any aspect of site planning - parking, access, landscaping, building footprint, etc? Why, and how did you use the information?

10. Have any of you ever visited buildings with an owner's representative or a resident manager, and solicited their opinions about problems with the building. In particular, we are thinking of matters such as access to landscaped roof decks over parking, underground and other parking, fencing, lighting, landscaping, access/egree points? If yes, can you elaborate on your observations. If no, why not?

11. If it were possible to advise applicants and make recommendations on a project from a crime prevention aspect, who should make such assessments and why? If it were the police department, how could it be most effeciently handled? If it were not the police department, how could the department's knowledge and experience be utilized?

12. During our study we first reviewed approved development plans prior to visiting the building. You can imagine our surprise when we found several instances where considerable changes to interior public areas had been made at certain builings? What are the limits of responsibility for the By-Law Officers in this respect?

Thank you for your assistance.

Interview with Police Personnel

INTERVIEW WITH POLICE PERSONNEL

A minimum of three security officers of the Calgary Police Department, representing site/building analysis, crime prevention programs and street policing in the study area, will be interviewed during a single meeting.

The interviewer will review briefly the goals and current status of the project, and explain why policing personnel opinion are being sought at this time. The following questions will be the basis for directing the discussion, and elaborating on areas of special knowledge, interest or experience in the field.

QUESTIONS

1. Have you ever been a victim of a residential property crime or are you a member of a local crime prevention program? Has your experience had any influence on the way you think about your role or perform your job as a police officer?

2. Have you ever read anything about community design for crime prevention or received any training you consider to have been helpful in reducing offender opportunity through community planning? Please describe. Estimate what percentage of the C.P.S. offences have received some sort of exposure to these concepts during their training.

3. How would you describe the way most police officers regard proactive policing as opposed to reactive policing? Why is this so?

4. The overall crime rate on a City-wide basis has been declining during the past two to three years. How has this trend affected the design and implementation of crime prevention programs in Calgary communities? Has the nature of policing activity changed during the past two years?

5. From previous conversations with police, my impresion is that many police officers view the study area as a "write-off". That is to say, with its highly transient population, absence of ownership, mix of land uses and location next to downtown, there are no known crime prevention programs which would be potentially effective for addressing the area's problems. Has anything happened to change the impression?

6. From the perspective of your individual responsibilities in the Calgary Police Service, what is your opinion of this particular area, the kind of housing it contains and the nature of the population which resides there at this time?

7. In a particular portion of the study area, owners, resident managers and residents complained about the effects of male prostitution in the vicinity of their buildings: increased fear, continuously circulating traffic, and anger. How is this problem being addressed? What are the estimated long term effects of your actions? (displacement) Are there other specific problems which are receiving attention?

8. Many respondents to the survey said they would like more police representation in the area, because "it would deter would-be offenders". Are the perceptions correct in your view? What is the current level of area patrolling (on foot and/or in vehicles)? Has there been any recent enhancement of service? How would you describe the changes? What specific problems might be resolved by more area policing?

9. Many respondents to the survey said they were unaware of C.P.S. crime prevention programs, knew nothing about information published by the C.P.S., and that they would be willing to meet with other residents to discuss and actively participate in crime prevention in their respective buildings.

   What information has been prepared by the C.P.S. to assist apartment residents to deal with criminal activity? How is the information marketed to the public? What promotional activities have been undertaken by the C.P.S. to market Crime Prevention Programs for apartment districts or buildings?

10. We encountered considerable difficulty in using the offence reports to elicit details about the target crimes in the area. The quality of information is affected by apparent confusion as to the meaning of categories on the report, many categories being left unanswered and limited commentary on other categories. In particular, theft from vehicles appears to be very much of a bare bones report.

    What is the police officers' opinion about offence reports? Are they confusing to fill out on the job? Do officers ever receive feedbsack on their reports and understand how they are used? How could the reports be changed to encourage more diligent response by the officers and make them more useful tools for crime analysis.

11. Would there be administrative and technical support at the district level for a policing role in reviewing development permit and building permit plan review? From a training standpoint, what would be needed to allow this activity to happen?

Thank you for your assistance.